Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Veronica Fauver Examiner #: 75635 Date: 4/27/04
Art Unit: 1755 Phone Number 30 _____ Serial Number: 10/617818
Mail Box and Bldg/Room Location: 9029 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

****

STAFF USE ONLY

Searcher: K. Fuller
Searcher Phone #: _____
Searcher Location: _____
Date Searcher Picked Up: _____
Date Completed: 5/3/04
Searcher Prep & Review Time: 20
Clerical Prep Time: _____
Online Time: 51

Type of Search

NA Sequence (#): _____
AA Sequence (#): _____
Structure (#): _____
Bibliographic: ✓
Litigation: _____
Fulltext: _____
Patent Family: _____
Other: _____

Vendors and cost where applicable

STN: ✓
Dialog: _____
Questel/Orbit: _____
Dr Link: _____
Lexis/Nexis: _____
Sequence Systems: _____
WWW/Internet: _____
Other (specify): _____

STIC Search Report
EIC 1700

STIC Database Tracking Number: 120515

TO: Veronica Faison **Location: REM 9D23** **Art Unit : 1755** **May 3, 2004** **Case Serial Number: 10/617818**	**From: Kathleen Fuller** **Location: EIC 1700** **REMSEN 4B28** **Phone: 571/272-2505** **Kathleen.Fuller@uspto.gov**

Search Notes

It was not possible to do a true structure search for the 12 compounds in claim 3 as the compounds are all different. The search would require 12 differenct structure queries which would cost more than $1200. I searched the exact compounds indexed by CA as acid precursors for the application and also did a text search.

```
=> FILE REG
FILE 'REGISTRY' ENTERED AT 16:00:15 ON 30 APR 2004
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STRUCTURE FILE UPDATES:   28 APR 2004  HIGHEST RN 677701-51-8
DICTIONARY FILE UPDATES:  28 APR 2004  HIGHEST RN 677701-51-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 16:00:20 ON 30 APR 2004
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FILE COVERS 1907 - 30 Apr 2004  VOL 140 ISS 19
FILE LAST UPDATED: 29 Apr 2004  (20040429/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=> D QUE
L2            11 SEA FILE=REGISTRY ABB=ON  (10132-07-7/BI OR 108-77-0/BI OR
                 52353-35-2/BI OR 644979-38-4/BI OR 644979-41-9/BI OR 644979-44-
                 2/BI OR 644979-47-5/BI OR 644979-51-1/Bl OR 646535-74-2/BI OR
                 646535-76-4/BI OR 99513-34-5/BI)
L4             1 SEA FILE=REGISTRY ABB=ON  646535-74-2
L5             1 SEA FILE=REGISTRY ABB=ON  646535-76-4
L6             9 SEA FILE=REGISTRY ABB=ON  L2 NOT (L4 OR L5)
L7          4865 SEA FILE=HCAPLUS ABB=ON  L6
L8            49 SEA FILE=HCAPLUS ABB=ON  L7(L)PRECUR?
L9             4 SEA FILE=HCAPLUS ABB=ON  L8(L)ACID#
```

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

```
L10        1711 SEA FILE=HCAPLUS ABB=ON  L7 AND DYE#
L11         133 SEA FILE=HCAPLUS ABB=ON  L10 AND INK#
L12           2 SEA FILE=HCAPLUS ABB=ON  L11 AND ACID(3A)PRECUR?
L13         285 SEA FILE=HCAPLUS ABB=ON  DYE# AND ACID(3A)PRECUR?
L14          15 SEA FILE=HCAPLUS ABB=ON  L13 AND INK#
L15         219 SEA FILE=HCAPLUS ABB=ON  DYE# AND ACID?(2A)RELEAS?
L16           4 SEA FILE=HCAPLUS ABB=ON  L15 AND INK#
L17          22 SEA FILE=HCAPLUS ABB=ON  L9 OR L12 OR L14 OR L16
L18           1 SEA FILE=HCAPLUS ABB=ON  L6(L)RELEAS?(L)ACID#
L19           0 SEA FILE=HCAPLUS ABB=ON  L18 AND DYE#
L20          22 SEA FILE=HCAPLUS ABB=ON  L17 OR L19
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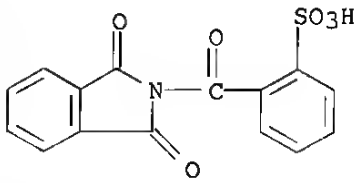
=> D L20 ALL 1-22 HITSTR

L20 ANSWER 1 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:117615 HCAPLUS
DN 140:154526
ED Entered STN: 13 Feb 2004
TI Ink-jet printing sheet containing acid precursor
IN Taguchi, Toshiki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 39 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B41M005-00
ICS B41J002-01
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004042563	A2	20040212	JP 2002-206003	20020715
PRAI	JP 2002-206003		20020715		

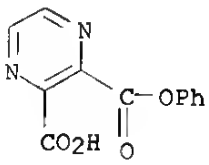
AB The sheet comprises a support coated with an ink receiving layer containing an acid precursor. The sheet gives clear images without blotting even under high moisture conditions.
ST ink jet printing sheet acid precursor
IT Ink-jet recording sheets
(ink-jet printing sheet containing acid precursor)
IT 24623-77-6, Aluminum hydroxide oxide (Al(OH)O)
RL: TEM (Technical or engineered material use); USES (Uses)
(boehmite-type; ink-jet printing sheet containing acid precursor)
IT 19745-07-4 **644979-38-4 644979-41-9** 653597-15-0
653597-16-1
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(ink-jet printing sheet containing **acid precursor**)
IT 1344-28-1, Alumina, uses 7631-86-9, QS 30, uses 9004-34-6D, Cellulose, derivs. 142517-79-1, Boric acid-PVA 124 copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(ink-jet printing sheet containing acid precursor)
IT 30551-89-4, PAA 10C
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(mordant; ink-jet printing sheet containing acid precursor)
IT **644979-38-4 644979-41-9**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material

use); USES (Uses)
(ink-jet printing sheet containing **acid precursor**)
RN 644979-38-4 HCAPLUS
CN Benzenesulfonic acid, 2-[(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)carbonyl]-, potassium salt (9CI) (CA INDEX NAME)



● K

RN 644979-41-9 HCAPLUS
CN 2,3-Pyrazinedicarboxylic acid, monophenyl ester, sodium salt (9CI) (CA INDEX NAME)

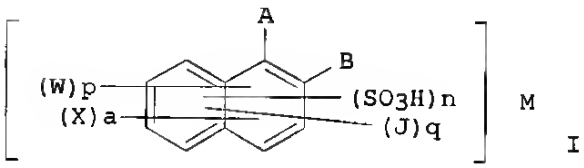


● Na

L20 ANSWER 2 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:101239 HCAPLUS
DN 140:147688
ED Entered STN: 08 Feb 2004
TI Jet printing with **inks** containing complexes of metals or boron with triazolylazosulfonaphthalene derivatives
IN Wright, Gavin; Johnson, Kevin; Raggatt, Mairi Elizabeth; Patel, Prakash
PA Avecia Limited, UK
SO PCT Int. Appl., 71 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C09D011-00
ICS C09B045-14; C09B045-16; C09B045-18; C09B045-20
CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 29, 42
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004011560	A2	20040205	WO 2003-GB2106	20030516

WO 2004011560 A3 20040318
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2004020405 A1 20040205 US 2003-441286 20030520
US 2004027399 A1 20040212 US 2003-441278 20030520
PRAI GB 2002-17442 A 20020727
GB 2002-17443 A 20020727
GB 2002-17444 A 20020727
GB 2002-17446 A 20020727
US 2002-410805P P 20020916
US 2002-410806P P 20020916
US 2002-410810P P 20020916
US 2002-410814P P 20020916
OS MARPAT 140:147688
GI



I

AB **Inks** containing complexes I [one of A and B is OH and the other is an azotriazole group; W = carboxy or amido group; X = group other than H, sulfonamido, carboxy, sulfo and amido, J = sulfonamido group; M = metal or boron; a, p, q and n = 0-44; and (p + q + a + n) = 0-4] provide jet-printed images with high brightness, light-fastness, and O3 resistance. A typical complex was manufactured by reaction of 3-hydroxy-2-naphthalenecarboxylic acid with diazonium salt of 3-amino-1,2,4-triazole-5-carboxylic acid hydrate and complexing the resulting azo compound with Ni(OAc)2.

ST jet printing **ink** triazolylazosulfonaphthalene deriv metal complex **dye**; carboxytriazolylazo hydroxycarboxynaphthalene nickel complex manuf **dye** jet printing **ink**

IT Azo **dyes**
(jet printing with **inks** containing complexes of metals or boron with triazolylazosulfonaphthalene derivs.)

IT **Inks**
(jet-printing; jet printing with **inks** containing complexes of metals or boron with triazolylazosulfonaphthalene derivs.)

IT 117-56-6P, 4-Hydroxynaphthalene-1,5-disulfonic acid 6361-38-2P, 3-Hydroxynaphthalene-2,6-disulfonic acid 652977-62-3P 652977-67-8P, 2-Hydroxynaphthalene-1,3,5,7-tetrasulfonic acid
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(azo compound coupling component; jet printing with **inks** containing

complexes of metals or boron with triazolylazosulfonaphthalene derivs.)

IT 84-87-7, 4-Hydroxynaphthalene-1-sulfonic acid 92-70-6, 3-Hydroxy-2-naphthalenecarboxylic acid 134-34-9 3316-02-7, 8-Hydroxynaphthalene-1,3,6-trisulfonic acid 6259-66-1, 7-Hydroxynaphthalene-1,3,6-trisulfonic acid 6334-97-0 6361-41-7 6409-21-8 6837-94-1 15509-36-1 23894-07-7, 2,7-Dihydroxynaphthalene-3,6-disulfonic acid 27327-65-7 56507-31-4 75633-80-6 652977-41-8 652977-45-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(azo compound coupling component; jet printing with **inks** containing complexes of metals or boron with triazolylazosulfonaphthalene derivs.)

IT 61-82-5, 3-Amino-1,2,4-triazole 3641-13-2, 3-Amino-1,2,4-triazole-5-carboxylic acid 4922-98-9, 3-Amino-5-phenyl-1,2,4-triazole 25979-00-4, 3-Amino-5-trifluoromethyl-1,2,4-triazole 45534-08-5, 3-Amino-5-methylthio-1,2,4-triazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(diazonium salt; jet printing with **inks** containing complexes of metals or boron with triazolylazosulfonaphthalene derivs.)

IT 651715-61-6P 651716-25-5P 652977-37-2P 652977-50-9P 652977-61-2P 652977-70-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(jet printing with **inks** containing complexes of metals or boron with triazolylazosulfonaphthalene derivs.)

IT 7440-02-0DP, Nickel, triazolylazosulfonaphthalene derivative complexes 7440-47-3DP, Chromium, triazolylazosulfonaphthalene derivative complexes 7440-48-4DP, Cobalt, triazolylazosulfonaphthalene derivative complexes 7440-50-8DP, Copper, triazolylazosulfonaphthalene derivative complexes 7440-66-6DP, Zinc, triazolylazosulfonaphthalene derivative complexes 82668-21-1DP, nickel complexes 92044-28-5DP, nickel complexes 479639-49-1DP, nickel complexes 651715-61-6DP, nickel complexes 651716-25-5DP, nickel complexes 652977-37-2DP, nickel complexes 652977-38-3DP, nickel complexes 652977-39-4DP, nickel complexes 652977-40-7DP, nickel complexes 652977-42-9DP, nickel complexes 652977-43-0DP, nickel complexes 652977-44-1DP, nickel complexes 652977-46-3DP, nickel complexes 652977-47-4DP, nickel complexes 652977-48-5DP, nickel complexes 652977-49-6DP, nickel complexes 652977-50-9DP, nickel complexes 652977-51-0DP, nickel complexes 652977-54-3DP, nickel complexes 652977-55-4DP, nickel complexes 652977-56-5DP, nickel complexes 652977-57-6DP, nickel complexes 652977-58-7DP, nickel complexes 652977-59-8DP, nickel complexes 652977-63-4DP, nickel complexes 652977-64-5DP, nickel complexes 652977-65-6DP, nickel complexes 652977-66-7DP, nickel complexes 652977-68-9DP, nickel complexes 652977-69-0DP, nickel complexes 652977-70-3DP, nickel complexes 652977-71-4DP, nickel complexes 652977-72-5DP, nickel complexes 652977-73-6DP, nickel complexes 652977-74-7DP, nickel complexes 652977-75-8DP, nickel complexes
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(jet printing with **inks** containing complexes of metals or boron with triazolylazosulfonaphthalene derivs.)

IT 84912-13-0P 651715-60-5P, 3,6-Bis(4-carboxyphenylaminosulfonyl)-2-hydroxynaphthalene 652977-52-1P, Disodium 2-acetoxynaphthalene-3,6-disulfonate 652977-53-2P, 2-Acetoxynaphthalene-3,6-disulfonyl chloride
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(ligand precursor; jet printing with **inks** containing complexes of metals or boron with triazolylazosulfonaphthalene derivs.)

IT 78-81-9, Isobutylamine 83-31-8, 1,8-Naphthosultone 92-40-0,

7-Hydroxynaphthalene-2-sulfonic **acid** 99-31-0, 5-Aminoisophthalic **acid** 108-24-7, Acetic anhydride 135-51-3, Disodium 2-hydroxynaphthalene-3,6-disulfonate 150-13-0, 4-Aminobenzoic **acid** 498-94-2, 4-Carboxypiperidine 10541-83-0, 4-(Methylamino)benzoic **acid**
RL: RCT (Reactant); RACT (Reactant or reagent)
(ligand **precursor**; jet printing with **inks** containing complexes of metals or boron with triazolylazosulfonaphthalene derivs.)

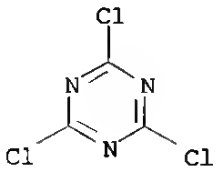
L20 ANSWER 3 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:36727 HCAPLUS
DN 140:112981
ED Entered STN: 16 Jan 2004
TI **Ink** containing **dyes** and **acid** **precursors** for inkjet, **ink** set for inkjet recording and inkjet recording method
IN Taguchi, Toshiki
PA Fuji Photo Film Co., Ltd., Japan
SO Eur. Pat. Appl., 34 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C09D011-00
CC 42-12 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1380623	A1	20040114	EP 2003-15588	20030714
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2004043665	A2	20040212	JP 2002-204171	20020712
	US 2004011247	A1	20040122	US 2003-617818	20030714
PRAI	JP 2002-204171	A	20020712		

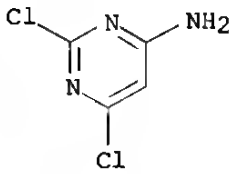
OS MARPAT 140:112981
AB An **ink** for inkjet recording comprises a **dye**, water, a water-miscible organic solvent and a precursor of acids, and thereby is rendered resistant to image blur even under a high humidity condition.
ST **dye acid precursor ink** jet printing
IT **Dyes**
(**ink** containing **dyes** and **acid** **precursors** for inkjet, **ink** set for inkjet recording and inkjet recording method)
IT **Inks**
(jet-printing; **ink** containing **dyes** and **acid** **precursors** for inkjet, **ink** set for inkjet recording and inkjet recording method)
IT **108-77-0 10132-07-7 52353-35-2 99513-34-5 644979-38-4 644979-41-9 644979-44-2 644979-47-5 644979-51-1**
RL: MOA (Modifier or additive use); USES (Uses)
(**acid precursor**; **ink** containing **dyes** and **acid precursors** for inkjet, **ink** set for inkjet recording and inkjet recording method)
IT 646535-74-2 646535-76-4
RL: TEM (Technical or engineered material use); USES (Uses)
(**dye**; **ink** containing **dyes** and **acid** **precursors** for inkjet, **ink** set for inkjet recording and inkjet recording method)

applicant

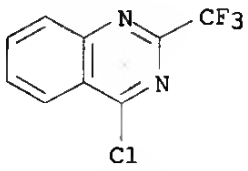
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Fuji Photo Film Co Ltd; EP 1193078 A 2002 HCAPLUS
(2) Fuji Photo Film Co Ltd; EP 1251154 A 2002 HCAPLUS
(3) Fuji Photo Film Co Ltd; EP 1340796 A 2003 HCAPLUS
(4) Ishizuka, T; US 2001023267 A1 2001 HCAPLUS
(5) Kimberly Clark Co; WO 0004104 A 2000 HCAPLUS
(6) Seiko Epson Corp; EP 0911374 A 1999 HCAPLUS
(7) Seiko Epson Corp; EP 1004641 A 2000 HCAPLUS
IT **108-77-0 10132-07-7 52353-35-2**
99513-34-5 644979-38-4 644979-41-9
644979-44-2 644979-47-5 644979-51-1
RL: MOA (Modifier or additive use); USES (Uses)
(**acid precursor**; **ink** containing **dyes**
and **acid precursors** for inkjet, **ink** set
for inkjet recording and inkjet recording method)
RN 108-77-0 HCAPLUS
CN 1,3,5-Triazine, 2,4,6-trichloro- (9CI) (CA INDEX NAME)



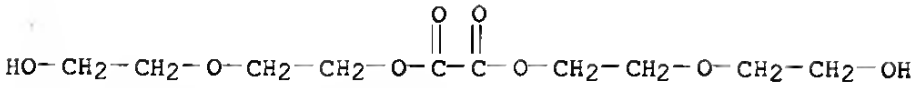
RN 10132-07-7 HCAPLUS
CN 4-Pyrimidinamine, 2,6-dichloro- (9CI) (CA INDEX NAME)



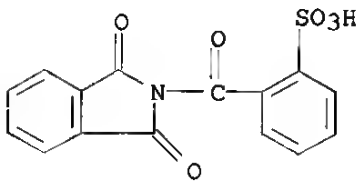
RN 52353-35-2 HCAPLUS
CN Quinazoline, 4-chloro-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 99513-34-5 HCAPLUS
CN Ethanedioic acid, bis[2-(2-hydroxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

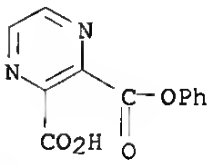


RN 644979-38-4 HCAPLUS
CN Benzenesulfonic acid, 2-[(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)carbonyl]-, potassium salt (9CI) (CA INDEX NAME)



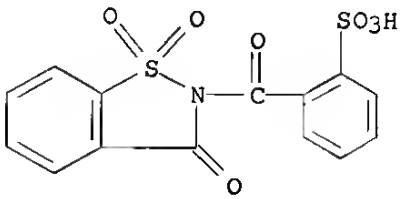
● K

RN 644979-41-9 HCAPLUS
CN 2,3-Pyrazinedicarboxylic acid, monophenyl ester, sodium salt (9CI) (CA INDEX NAME)



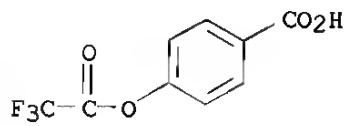
● Na

RN 644979-44-2 HCAPLUS
CN Benzenesulfonic acid, 2-[(1,1-dioxido-3-oxo-1,2-benzisothiazol-2(3H)-yl)carbonyl]-, potassium salt (9CI) (CA INDEX NAME)



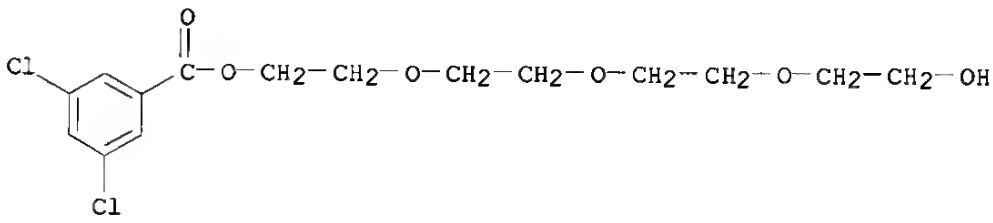
● K

RN 644979-47-5 HCAPLUS
CN Benzoic acid, 4-[(trifluoroacetyl)oxy]-, potassium salt (9CI) (CA INDEX NAME)



● K

RN 644979-51-1 HCAPLUS
CN Benzoic acid, 3,5-dichloro-, 2-[2-[2-(2-hydroxyethoxy)ethoxy]ethoxy]ethyl ester (9CI) (CA INDEX NAME)



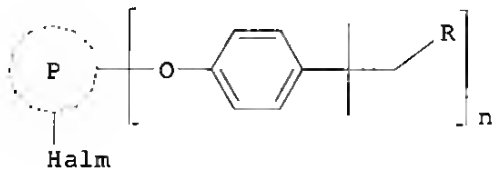
L20 ANSWER 4 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:754392 HCAPLUS
DN 137:280621
ED Entered STN: 04 Oct 2002
TI Tertiary alkylphenoxy-substituted polycyclic compounds
IN Boehm, Arno; Helfer, Willi; Beck, Georg; Krieger, Matthias; Erk, Peter
PA BASF Aktiengesellschaft, Germany
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C07D487-06
ICS C07D209-56; C07D241-38; C07D487-22; C09B069-10; C07D487-06; C07D209-00; C07D209-00; C07D487-22; C07D259-00; C07D209-00; C07C209-00; C07C209-00
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 27
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002076988	A2	20021003	WO 2002-EP3279	20020320
	WO 2002076988	A3	20030213		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,

PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1373272 A2 20040102 EP 2002-735166 20020320
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
US 2004049030 A1 20040311 US 2003-472546 20030923
PRAI US 2001-278009P P 20010323
WO 2002-EP3279 W 20020320
OS MARPAT 137:280621
GI



I

AB Tert-alkylphenoxy-substituted polycyclic compds. of general formula I, in which the variables have the following meanings: P = a conjugated polycyclic group, optionally aryl substituted, stable to base and acid and not containing residues from CONHCO, COOH and COOCO; R = C1-C8 alkyl, the carbon chain of which may be interrupted by one or several groups of O, S, NR1, CO and/or SO2 and which may be mono- or serially-substituted by C1-C6 alkoxy or a 5- to 7-membered heterocyclic group, bonded by means of a nitrogen atom, which can contain further heteroatoms and can be aromatic, C5-C8 cycloalkyl, the carbon skeleton of which may be interrupted by one or several groups of O, S, NR1, CO and/or SO2 and may optionally be substituted with C1-C6 alkyl; R1 = H or C1-C6 alkyl; Hal = chlorine and/or bromine; m = a number from 0 to 15; n = a number from 1 to 16, whereby the sum m + n ≤ 16 are useful for **dyes**. I are manufactured by reaction of the appropriate halogenated polycyclic compound with the appropriate tert-alkylphenol. A typical **dye** was manufactured by reaction of 14.4 g N-(2,6-diisopropylphenyl)-1,6,9-tribromoperylene-3,4-dicarboximide containing 16% mono- and dibrominated N-(2,6-diisopropylphenyl)perylene-3,4-dicarboximide with 13.6 g p-tert-octylphenol 6 h at 90° in NMP in the presence of KCO3.

ST tertiary alkylphenyl substituted polycyclic **dye**; diisopropylphenylperylenedicarboximide brominated tertiary octylphenyl deriv **dye** manuf

IT Optical filters
(near-IR; tertiary alkylphenoxy-substituted polycyclic compds. for optical absorbers)

IT **Inks**
(printing; tertiary alkylphenoxy-substituted polycyclic compds. for **dyes** for coloring printing **inks**)

IT Dispersing agents
(tertiary alkylphenoxy-substituted polycyclic compds. for dispersants for organic pigments)

IT **Dyes**
(tertiary alkylphenoxy-substituted polycyclic compds. for **dyes**

)
IT Lacquers
(tertiary alkylphenoxy-substituted polycyclic compds. for **dyes** for coloring lacquers)
IT Plastics, miscellaneous
RL: MSC (Miscellaneous)
(tertiary alkylphenoxy-substituted polycyclic compds. for **dyes** for coloring plastics)
IT Cosmetics
(tertiary alkylphenoxy-substituted polycyclic compds. for **dyes** for cosmetics)
IT UV stabilizers
(tertiary alkylphenoxy-substituted polycyclic compds. for optical absorbers)
IT 464885-23-2P 464885-25-4P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(precursor; tertiary alkylphenoxy-substituted polycyclic compds. for **dyes**)
IT 464885-17-4 464885-18-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(precursor; tertiary alkylphenoxy-substituted polycyclic compds. for **dyes**)
IT 187536-95-4, N,N'-Bis(2,6-Diisopropylphenyl)terrylene-3,4:11,12-tetracarboxylic **acid** diimide 452084-79-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material **precursor**; tertiary alkylphenoxy-substituted polycyclic compds. for **dyes**)
IT 464885-24-3P 464885-26-5P
RL: IMF (Industrial manufacture); PREP (Preparation)
(tertiary alkylphenoxy-substituted polycyclic compds. for **dyes**
)
IT 81-77-6DP, Indanthrone, chlorinated, reaction products with tert-octylphenol 140-66-9DP, p-tert-Octylphenol, reaction products with brominated polycyclic compds. 147-14-8DP, Copper phthalocyanine, chlorinated, reaction products with tert-octylphenol 112078-00-9DP, reaction products with tert-alkylphenols 165550-61-8DP, N-(2,6-Diisopropylphenyl)perylene-3,4-dicarboximide, brominated, reaction products with tert-octylphenol 331861-94-0DP, N,N'-Bis(2,6-Diisopropylphenyl)-1,7-dibromoperylene-3,4:9,10-tetracarboxylic acid diimide, reaction products with tert-alkylphenols 333304-54-4P 464885-15-2DP, p-(2-Cyclohexyl-1,1-dimethylethyl)phenol, reaction products with brominated polycyclic compds. 464885-16-3DP, N,N'-Didodecyl-1,7-dibromoperylene-3,4:9,10-tetracarboxylic acid diimide, reaction products with tert-alkylphenols 464885-19-6P 464885-20-9P 464885-21-0P 464885-22-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(tertiary alkylphenoxy-substituted polycyclic compds. for **dyes**
)

L20 ANSWER 5 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:503418 HCAPLUS
DN 137:64536
ED Entered STN: 05 Jul 2002
TI Salicylamide derivative monoazo **dyes**, their production and their use
IN Baettig, Kurt
PA Ilford Imaging Switzerland G.m.b.H., Switz.

SO Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM C09B029-03
ICS C09B029-30; C09B067-22; C09D011-00
CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 25, 42
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1219682	A1	20020703	EP 2000-811216	20001221
	EP 1219682	B1	20030205		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	AT 232227	E	20030215	AT 2000-811216	20001221
	US 2002121221	A1	20020905	US 2001-23004	20011217
	US 6709502	B2	20040323		
PRAI	EP 2000-811216	A	20001221		

OS CASREACT 137:64536; MARPAT 137:64536
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Red and purple azo **dyes** (I; R1 = H, Cl-6-alkyl, NO2, F, Cl, Br; M = H, metal, ammonium; m = 0-2, n = 0, 1) and II (R1 = as for I; R2, R3 = H, F, Cl, Br, C1-6 organic group; m, n as for I) are obtained from 5-salicylamido-4-hydroxy-2-naphthalenesulfonic acid derivative coupling components for use in jet printing **inks** with good application and performance properties. In an example, a coupling component was obtained from 4-amino-5-hydroxynaphthalene-2,7-disulfonic acid mono-Na salt by N-acylation with a salicylic acid derivative and then coupled with diazotized 2-naphthylamine-1,5-disulfonic acid to give a **dye**.
ST azo **dye** prodn salicylamide deriv coupling component; jet printing **ink** red purple azo **dye** prodn
IT **Inks**
(jet-printing; production of salicylamide derivative monoazo **dyes** for jet printing **inks**)
IT Azo **dyes**
(production of salicylamide derivative monoazo **dyes** for jet printing **inks**)
IT 83-40-9 5138-68-1 5460-09-3, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid monosodium salt 5538-51-2, Acetylsalicylic **acid** chloride 15198-07-9, 3-Methylsalicyloyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling component **precursor**; production of salicylamide derivative monoazo **dyes** for jet printing **inks**)
IT 439683-94-0P 439683-96-2P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(coupling component; production of salicylamide derivative monoazo **dyes** for jet printing **inks**)
IT 50-78-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling component; production of salicylamide derivative monoazo **dyes**

for jet printing **inks**)
IT 117-62-4, 2-Naphthylamine-1,5-disulfonic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(diazo component; production of salicylamide derivative monoazo **dyes** for jet printing **inks**)
IT 385764-96-5P 439683-74-6P 439683-75-7P 439683-76-8P 439683-77-9P
439683-78-0P 439683-79-1P 439683-81-5P 439683-84-8P 439683-87-1P
439683-89-3P 439683-90-6P 439683-91-7P 439683-92-8P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**dye**; production of salicylamide derivative monoazo **dyes** for jet printing **inks**)
RE.CNT 9 , THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Canon Kk; EP 0345763 A 1989 HCAPLUS
(2) Canon Kk; EP 0366121 A 1990 HCAPLUS
(3) Canon Kk; US 5074914 A 1991 HCAPLUS
(4) Canon Kk; EP 0507239 A 1992 HCAPLUS
(5) Geigy Ag J R; CH 343231 A 1959 HCAPLUS
(6) Lexmark Int Inc; US 5254160 A 1993 HCAPLUS
(7) Lexmark Int Inc; EP 0602816 A 1994 HCAPLUS
(8) Mitsubishi Chem Ind; GB 2131825 A 1984 HCAPLUS
(9) Miura, K; US 5542970 A 1996 HCAPLUS

L20 ANSWER 6 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:247580 HCAPLUS
DN 134:267852
ED Entered STN: 06 Apr 2001
TI **Dye** sublimation thermal transfer paper, a transfer sheet kit, and thermal transfer to fabrics
IN Hare, Donald S.; Williams, Scott A.
PA Foto-Wear, Inc., USA
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM D06P005-00
ICS B41M005-035; D06Q001-12; B44C001-17
CC 42-11 (Coatings, Inks, and Related Products)
Section cross-reference(s): 40, 74
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001023664	A1	20010405	WO 2000-US26796	20000929

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-156593P P 19990929
AB An image transfer sheet comprises a support, a barrier layer, a **dye** sublimation **ink** layer, and a polyester layer; where the image transfer sheet exhibits cold peel, warm peel and hot peel properties when transferred to fabrics. The title image transfer sheet can be applied to a receptor element, such as cotton or cotton/polyester

blend fabrics. Thus, a thermal transfer sheet had a film or paper support, a barrier layer of PMMA (in acetone/propanol), a color **dye** print (image) layer, polyester release layer of Michem. Prime 4983R dispersion, wax, and retention aid, prior to transfer to a 100% cotton fabric using a hand iron.

ST textile thermal transfer image transfer sheet; cotton tee shirt thermal transfer paper; PMMA barrier layer thermal transfer paper; acrylic **acid** ethylene copolymer **release** thermal transfer paper

IT Epoxy resins, uses
Nitrile rubber, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(barrier layer; sublimation **dye**-based thermal transfer sheet containing)

IT Textiles
(cotton-polyester; sublimation **dye**-based thermal transfer paper for printing)

IT Textiles
(cotton; sublimation **dye**-based thermal transfer paper for printing)

IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(film support or release layer; sublimation **dye**-based thermal transfer sheet containing)

IT Acrylic rubber
RL: TEM (Technical or engineered material use); USES (Uses)
(polyester release layer; sublimation **dye**-based thermal transfer sheet containing)

IT Decalcomanias
(sublimation **dye**-based thermal transfer paper for)

IT Paper
(support film or; sublimation **dye**-based thermal transfer sheet containing)

IT Ceramics
Nonwoven fabrics
Wood
(support; sublimation dye-based thermal transfer sheet for printing)

IT Glass, miscellaneous
Metals, miscellaneous
Plastics, miscellaneous
RL: MSC (Miscellaneous)
(support; sublimation **dye**-based thermal transfer sheet for printing)

IT Thermal-transfer printing
(textile; sublimation **dye**-based thermal transfer paper for)

IT Textile printing
(thermal-transfer; sublimation **dye**-based thermal transfer paper for)

IT Transfers
(thermal; sublimation **dye**-based thermal transfer paper)

IT 9002-86-2, PVC 9003-01-4, Poly(acrylic acid) 9003-20-7, Poly(vinyl acetate) 9003-55-8, Butadiene-styrene copolymer 9011-14-7, PMMA 24937-78-8, Everflex G 25035-90-9, Dibutyl maleate-vinyl acetate copolymer 25085-98-7, Uvacure 1500 37348-52-0, DEN 431 266309-52-8, Uvacure 1562 300371-67-9, Evcote PWR 25
RL: TEM (Technical or engineered material use); USES (Uses)
(barrier layer; sublimation **dye**-based thermal transfer sheet containing)

IT 9003-18-3

RL: TEM (Technical or engineered material use); USES (Uses)
(nitrile rubber, barrier layer; sublimation **dye**-based thermal transfer sheet containing)

IT 25212-83-3, Michem Prime 4983R 176742-40-8, Daotan VTW 1265
RL: TEM (Technical or engineered material use); USES (Uses)
(polyester release layer; sublimation **dye**-based thermal transfer sheet containing)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Brandywine Motifs Ltd; EP 0351085 A 1990 HCAPLUS
(2) Coleman, K; US 5741387 A 1998 HCAPLUS
(3) Heliome Ltd; GB 2084931 A 1982
(4) Porter, K; GB 2147614 A 1985 HCAPLUS

L20 ANSWER 7 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:659460 HCAPLUS
DN 131:287746
ED Entered STN: 15 Oct 1999
TI Sulfonyl group-containing triphenodioxazine **dyes**, their production and their use
IN Schofberger, Georg
PA Clariant Finance (BVI) Limited, Virgin I. (Brit.); Clariant International Ltd.
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C09B019-02
ICS C09B062-04
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 40, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9951681	A1	19991014	WO 1999-IB338	19990301
	W: CA, CN, JP, KR, TR				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2327679	AA	1999I014	CA 1999-2327679	19990301
	EP 1066340	A1	20010110	EP 1999-903853	19990301
	EP 1066340	B1	20020724		
	R: CH, DE, ES, FR, GB, IT, LI				
	JP 2002510735	T2	20020409	JP 2000-542397	19990301
	ES 2180271	T3	20030201	ES 1999-903853	19990301
	CN 1118520	B	20030820	CN I999-804579	19990301
	US 6319289	B1	20011120	US 1999-283079	19990331
	HK 1036818	A1	20031205	HK 2001-107659	20011102
PRAI	CH 1998-805	A	19980403		
	WO 1999-IB338	W	1999030I		

OS MARPAT 131:287746

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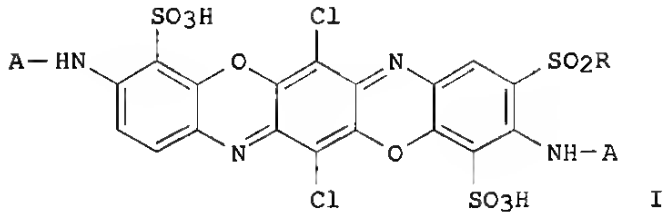


I

AB The **dyes** (I; A = H or substituent; R = substituent) are obtained by treating a a sulfonyl-free triphenodioxazine **precursor** with a sulfinic **acid** in the presence of an oxidizing agent and are useful for **ink**-jet **inks** or for dyeing amide group-containing textiles. I may have reactive groups for dyeing of cotton and are characterized by good exhaustion, fixation, and fastness properties. In an example, 3,10-diamino-6,13-dichloro-4,11-triphenodioxazinedisulfonic acid was treated with 4-acetamidobenzenesulfinic acid in the presence of K peroxydisulfate to give a **dye** which provided brilliant reddish blue shades on polyamides and wool.

ST triphenodioxazine **dye** sulfone deriv prodn

IT **Inks**
(jet-printing; production of sulfonyl group-containing triphenodioxazine **dyes** for)

IT **Dyes**
Reactive **dyes**
(production of sulfonyl group-containing triphenodioxazine **dyes**)

IT Dyeing
Reactive dyeing
(production of sulfonyl group-containing triphenodioxazine **dyes** for)

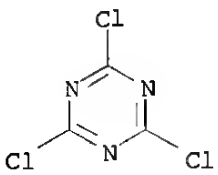
IT Leather
(production of sulfonyl group-containing triphenodioxazine **dyes** for dyeing of)

IT 94-36-0, Benzoyl peroxide, uses 7705-08-0, Ferric chloride, uses 7727-21-1, Potassium peroxydisulfate 7727-54-0, Ammonium peroxydisulfate 7775-27-1, Sodium peroxydisulfate 10588-01-9
RL: NUU (Other use, unclassified); USES (Uses)
(oxidizing agent; in production of sulfonyl group-containing triphenodioxazine **dyes**)

IT 246046-37-7P 246046-38-8P 246046-39-9P 246046-40-2P 246046-41-3P 246219-59-0P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(reddish blue **dye**; production of sulfonyl group-containing triphenodioxazine **dyes**)

IT 98-59-9, 4-Toluenesulfonyl chloride **108-77-0**, Cyanuric chloride 618-41-7, Benzenesulfinic acid 710-24-7, 4-Acetamidobenzenesulfinic acid 824-79-3, 4-Methylbenzenesulfinic acid sodium salt 873-55-2, Benzenesulfinic acid sodium salt 929-06-6 6527-70-4, C.I. Direct Blue 106 20277-69-4, Sodium methanesulfinate 63735-42-2, 2-Naphthalenesulfinic acid sodium salt 91367-88-3, 3-Aminobenzenesulfinic acid 98210-99-2, 3,10-Diamino-6,13-dichloro-4,11-triphenodioxazinedisulfonic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; in production of sulfonyl group-containing

triphenodioxazine **dyes**)
IT 246046-42-4P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(violet **dye**; production of sulfonyl group-containing triphenodioxazine **dyes**)
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Bayer AG; EP 0681005 A 1995 HCAPLUS
(2) Sumitomo Chem Co Ltd; JP 385120 A 1990
(3) Sumitomo Chem Co Ltd; EP 0472975 A 1992 HCAPLUS
(4) Sumitomo Chem Co Ltd; JP 06107961 A 1994 HCAPLUS
(5) Sumitomo Chem Co Ltd; JP 06299474 A 1994 HCAPLUS
(6) Sumitomo Chemical Co; JP 06073670 A 1994 HCAPLUS
(7) Sumitomo Chemical Company, Ltd; EP 0541084 A 1993 HCAPLUS
IT **108-77-0**, Cyanuric chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; in production of sulfonyl group-containing triphenodioxazine **dyes**)
RN 108-77-0 HCAPLUS
CN 1,3,5-Triazine, 2,4,6-trichloro- (9CI) (CA INDEX NAME)



L20 ANSWER 8 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:404937 HCAPLUS
DN 131:74977
ED Entered STN: 01 Jul 1999
TI Perylene imide monocarboxylic acid derivatives, their preparation and their use as colorants
IN Langhals, Heinz; Jona, Wolfgang
PA Ciba Specialty Chemicals Holding Inc., Switz.
SO PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D221-18
ICS C09B005-62
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 42
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9931069	A1	19990624	WO 1998-EP7998	19981209

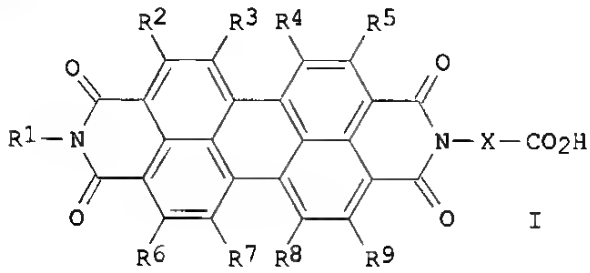
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,

FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US	6166210	A	20001226	US 1998-204189	19981203
AU	9917600	A1	19990705	AU 1999-17600	19981209
EP	1053228	A1	20001122	EP 1998-962430	19981209
	R: CH, DE, FR, GB, IT, LI				
JP	2002508406	T2	20020319	JP 2000-538996	19981209
PRAI	EP 1997-810981	A	19971215		
	WO 1998-EP7998	W	19981209		

OS MARPAT 131:74977

GI



I

AB Monocarboxylic acid derivs. of perylenedicarboxylic diimides (I; R1, R2, R3, R4, R5, R6, R7, R8, R9 = H, organic group; X = C1-37-alkanediyl, -alkenediyl, -alkynediyl, C5-12-cycloalkylene, -cycloalkenylene, -cycloalkynylene, divalent carbocyclic group, divalent heterocyclic aromatic connecting group), of perylenedicarboxylic monoimides, and ester and amide derivs. of the carboxylic acid group are obtained from the appropriate diacid anhydride **precursor** and desired carboxylic **acid** primary amine derivative The carboxylic acid group can be used to react with a substrate to give the fluorescent imide colorants a degree of fastness. In an example, N-(1-hexylheptyl)perylene-3,4:9,10-tetracarboxylic acid 3,4-anhydride-9,10-imide was heated with 4-aminobenzoic acid to give the fluorescent N'-(4-carboxyphenyl) diimide.

ST perylenetetracarboxylic diimide carboxylic acid deriv fluorescent; fluorescent **dye** perylene imide deriv prodn

IT **Inks**
(jet-printing; production of fluorescent perylene imide monocarboxylic acid derivs. for)

IT Fluorescent **dyes**
Fluorescent pigments
(production of fluorescent perylene imide monocarboxylic acid derivs.)

IT Color electrophotographic toners
Fluorescent indicators
(production of fluorescent perylene imide monocarboxylic acid derivs. for)

IT **Dyes**
(vat; production of fluorescent perylene imide monocarboxylic acid derivs. for)

IT 207342-42-5P 207342-43-6P 207342-44-7P 207342-45-8P 207342-46-9P 207342-48-1P 207342-49-2P 207342-50-5P 228111-23-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorescent colorant; production of fluorescent perylene imide

monocarboxylic acid derivs.)
IT 56-12-2, 4-Aminobutyric acid, reactions 56-40-6, Glycine, reactions 60-32-2, 6-Aminocaproic acid 64-17-5, Ethanol, reactions 99-05-8, 3-Aminobenzoic acid 118-92-3, 2-Aminobenzoic acid 150-13-0, 4-Aminobenzoic acid 2432-99-7 117364-74-6, Perylene-3,4-dicarboxylic anhydride 130296-37-6, N-(1-Hexylheptyl)perylene-3,4:9,10-tetracarboxylic acid 3,4-anhydride-9,10-imide 130296-39-8, N-(1-Nonyldecyl)perylene-3,4:9,10-tetracarboxylic acid 3,4-anhydride-9,10-imide
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; production of fluorescent perylene imide monocarboxylic acid derivs.)
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Asahi Chem Ind Co, Ltd; JP 02196885 A 1990 HCAPLUS
(2) BASF AG; WO 9622332 A 1996 HCAPLUS
(3) Ciba-Geigy AG; EP 0283436 A 1988 HCAPLUS
(4) Hoechst AG; EP 0039482 A 1981 HCAPLUS
(5) Hoechst AG; EP 0122442 A 1984 HCAPLUS
(6) Hoechst AG; DE 3926564 A 1991 HCAPLUS
(7) Hoechst AG; EP 0504872 A 1992 HCAPLUS
(8) Langhals, H; DE 4338784 A 1995 HCAPLUS
(9) Societe Rhodiaceta; FR 1570579 A 1969 HCAPLUS

L20 ANSWER 9 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:474056 HCAPLUS
DN 129:110111
ED Entered STN: 30 Jul 1998
TI Perylene-based **dye** intermediates, their preparation by a single-step decarboxylation, and their use
IN Langhals, Heinz; Von Unold, Petra
PA Germany
SO Ger. Offen., 16 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C07D493-00
ICS C07D493-02; C07D471-00; C07D471-02
CC 41-9 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19700990	A1	19980716	DE 1997-19700990	19970114
	WO 9831678	A1	19980723	WO 1998-EP7	19980102
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9858616	A1	19980807	AU 1998-58616	19980102
	AU 729773	B2	20010208		
	EP 1019388	A1	20000719	EP 1998-901939	19980102
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
	JP 2001509172	T2	20010710	JP 1998-533610	19980102
	US 5981773	A	19991109	US 1998-7195	19980114

PRAI DE 1997-19700990 A 19970114
WO 1998-EP7 W 19980102
OS MARPAT 129:110111
AB Perylene-3,4:9,10-tetracarboxylic acid dianhydride (I) (and its derivs.) may be decarboxylated in the presence of noncondensable amines to give perylene-3,4-dicarboxylic anhydride (II), perylene-4-carboxylic acid, or perylene-3,4-dicarboximide in 24-76% yields. Thus, I was heated with iso-Pr2NEt, Zn(OAc)2 dihydrate, and imidazole to give 25% II. Other amines used were DABCO, 3-amino-3-ethylpentane, and DBU.
ST perylenetetracarboxylic dianhydride decarboxylation selective amine catalyst; **dye** precursor perylenecarboxylic deriv prodn; pigment precursor perylenecarboxylic deriv prodn
IT Decarboxylation catalysts
(amines; in production of **dye** precursors from perylenetetracarboxylic dianhydride)
IT Amines, uses
RL: CAT (Catalyst use); USES (Uses)
(decarboxylation catalysts; production of **dye** precursors from perylenetetracarboxylic dianhydride)
IT **Dyes**
(intermediates; production of **dye** precursors from perylenetetracarboxylic dianhydride)
IT **Dyes**
(laser; production of **dye** precursors from perylenetetracarboxylic dianhydride)
IT **Inks**
(marking; production of **dye** precursors from perylenetetracarboxylic dianhydride for)
IT Optical instruments
(nonlinear; production of **dye** precursors from perylenetetracarboxylic dianhydride for)
IT Aminoplasts
Polyamides, uses
Polybenzimidazoles
Polycarbonates, uses
Polyesters, uses
Polyethers, uses
Polyimides, uses
Polysiloxanes, uses
Polyurethanes, uses
RL: POF (Polymer in formulation); USES (Uses)
(perylene **dye** and pigment intermediates for coloration of)
IT **Inks**
(printing; production of **dye** precursors from perylenetetracarboxylic dianhydride for)
IT Fluorescent **dyes**
(production of **dye** precursors from perylenetetracarboxylic dianhydride)
IT Dyeing
Electroluminescent devices
Electrophotography
Photoconductors
Photographic sensitizers
Scintillators
Semiconductor devices
Solar collectors
Textile printing
Vat dyeing
(production of **dye** precursors from perylenetetracarboxylic

dianhydride for)

IT **Dyes**
(vat; production of **dye** precursors from perylenetetracarboxylic dianhydride)

IT **Inks**
(writing; production of **dye** precursors from perylenetetracarboxylic dianhydride for)

IT 280-57-9, DABCO 6674-22-2, DBU
RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(decarboxylation catalyst/imide nitrogen source; production of **dye** precursors from perylenetetracarboxylic dianhydride)

IT 30346-87-3, Methylimidazole
RL: CAT (Catalyst use); USES (Uses)
(decarboxylation catalyst; in production of **dye** precursors from perylenetetracarboxylic dianhydride)

IT 91-22-5, Quinoline, uses 108-48-5, 2,6-Lutidine 110-86-1, Pyridine, uses 288-32-4, Imidazole, uses 557-34-6, Zinc acetate 585-48-8, 2,6-Di-tert-butylpyridine 1571-51-3, 3-Amino-3-ethylpentane 5970-45-6, Zinc acetate dihydrate 7087-68-5, Diisopropylethylamine 69010-98-6, Tetramethylpiperidine
RL: CAT (Catalyst use); USES (Uses)
(decarboxylation catalyst; production of **dye** precursors from perylenetetracarboxylic dianhydride)

IT 9002-86-2, PVC 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-08-1, Melamine-formaldehyde copolymer 9003-17-2, Polybutadiene 9003-20-7, Poly(vinyl acetate) 9003-31-0, Polyisoprene 9003-53-6, Polystyrene 9004-35-7, Cellulose acetate 9011-14-7, PMMA 9063-70-1, Poly(chlorobutadiene) 25014-41-9, Polyacrylonitrile
RL: POF (Polymer in formulation); USES (Uses)
(perylene **dye** and pigment intermediates for coloration of)

IT 7350-88-1P, Perylene-3-carboxylic **acid** 33955-44-1P, Perylene-3,4-dicarboximide 117364-74-6P, Perylene-3,4-dicarboxylic anhydride
RL: IMF (Industrial manufacture); PREP (Preparation)
(production of **dye precursors** from perylenetetracarboxylic dianhydride)

IT 128-69-8, Perylene-3,4:9,10-tetracarboxylic acid dianhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; production of **dye** precursors from perylenetetracarboxylic dianhydride)

L20 ANSWER 10 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:163782 HCAPLUS
DN 128:205916
ED Entered STN: 19 Mar 1998
TI Water-soluble copper phthalocyanine derivative **dyes**, their production and use
IN Bauer, Wolfgang; Baumgart, Dieter; Zoeller, Walter; Kreutzer, Klaus-Peter
PA Clariant G.m.b.H., Germany
SO Ger. Offen., 10 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C09B047-26
ICS D06P001-40; C09D011-00; D21H021-28; C07F001-08
CC 41-7 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 42, 43

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19634354	A1	19980305	DE 1996-19634354	19960826
	EP 827985	A1	19980311	EP 1997-114242	19970818
	EP 827985	B1	20001122		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 5882360	A	19990316	US 1997-918599	19970824
	JP 10130517	A2	19980519	JP 1997-228400	19970825
PRAI	DE 1996-19634354	A	19960826		

OS MARPAT 128:205916

AB Water-soluble (MO3S)cCuPc(SO2NR1XNR3R4)a(SO2NR2YCO2M)b [I; CuPc = copper phthalocyanine group; X = C2-6 alkylene; Y = (OH-, CO2H-, or amino-substituted) C2-6 alkylene; R1, R2 = H or C1-4 alkyl; R3 = H, C1-4 alkyl, C1-4 hydroxyalkyl, C1-4 aminoalkyl; R4 = H or C1-4 alkyl; M = monovalent or an equivalent of multivalent cation; a, b = 1 or 2; c = 0 or 1; a + b + c = 3 or 4], useful for **inks** and paper colorants, are manufactured by reaction of CuPc(SO2Cl)z (z = 3 or 4) with R1NHXNR3R4 and R2HNYCO2H (R1-4, X, and Y = same as in I).

ST water soluble copper phthalocyanine **dye** manuf; paper **dye** copper phthalocyanine deriv; carboxyaminated copper phthalocyanine **dye** manuf; aminated copper phthalocyanine **dye** manuf; sulfonated copper phthalocyanine **dye** manuf

IT **Inks**
(jet-printing; water-soluble copper phthalocyanine derivative **dyes** for **inks** and paper colorants)

IT **Dyes**
Paper
(water-soluble copper phthalocyanine derivative **dyes** for **inks** and paper colorants)

IT 88548-02-1P, Copper phthalocyanine tetrasulfonyl chloride
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(**dye** precursor; water-soluble copper phthalocyanine derivative **dyes** for **inks** and paper colorants)

IT 109-55-7, 3-Dimethylaminopropylamine 147-14-8, Copper phthalocyanine 7790-94-5, Chlorosulfonic **acid**
RL: RCT (Reactant); RACT (Reactant or reagent)
(**dye precursor**; water-soluble copper phthalocyanine derivative **dyes** for **inks** and paper colorants)

IT 203929-95-7P 203929-97-9P 203929-99-1P 203930-00-1P 203930-02-3P 203930-04-5P 203930-06-7P 203930-07-8P 203930-08-9P 203930-09-0P
RL: IMF (Industrial manufacture); PREP (Preparation)
(water-soluble copper phthalocyanine derivative **dyes** for **inks** and paper colorants)

IT 203929-96-8P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(water-soluble copper phthalocyanine derivative **dyes** for **inks** and paper colorants)

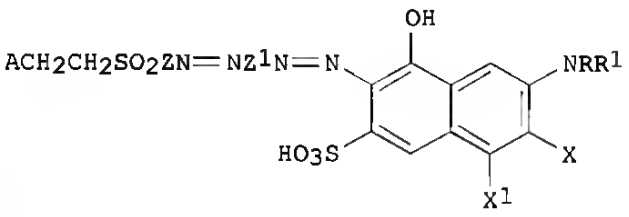
L20 ANSWER 11 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:618150 HCAPLUS
DN 127:264204
ED Entered STN: 27 Sep 1997
TI Disazo **dyes** and water-thinned jet-printing **inks** containing them
IN Gregory, Peter; Kenyon, Ronald Wynford; Wight, Paul

PA Zeneca Ltd., UK; Gregory, Peter; Kenyon, Ronald Wynford; Wight, Paul
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C09B031-08
ICS C09B067-22; C09D011-00
CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 40

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9732932	A1	19970912	WO 1997-GB483	19970221
	W: AU, CA, JP, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9718063	A1	19970922	AU 1997-18063	19970221
	EP 888407	A1	19990107	EP 1997-903523	19970221
	R: CH, DE, FR, GB, IT, LI				
	JP 2000506915	T2	20000606	JP 1997-531544	19970221
	US 5969114	A	19991019	US 1998-142496	19981103
PRAI	GB 1996-4900		19960308		
	WO 1997-GB483		19970221		

OS MARPAT 127:264204
GI



I

AB The **dyes** (I; A = optionally substituted alkoxy, acyloxy, or amino; R = H, optionally substituted alkyl or aryl, aminoalkyl; R1 = H, optionally substituted alkyl, alkylcarbonyl, alkylsulfonyl, alkoxycarbonyl, alkoxysulfonyl, arylcarbonyl, or arylsulfonyl; X, X1 = H, SO3H; Z = optionally substituted phenylene or naphthylene; Z1 = optionally substituted 1,4-phenylene or 1,4-naphthylene) or their salts are useful as black colorants for **ink** jet printing **inks**. In an example of preparation of such a **dye**, 4-(β-sulfatoethylsulfonyl)aniline→2-methoxy-5-methylaniline was obtained and condensed with morpholine. The product was diazotized and coupled with N-(2-piperazinoethyl)gamma acid to provide a disazo **dye**.

ST disazo **dye** prepn jet printing **ink**; azo **dye** prepn black **ink**

IT **Ink**-jet printing
(black disazo **dyes** for)

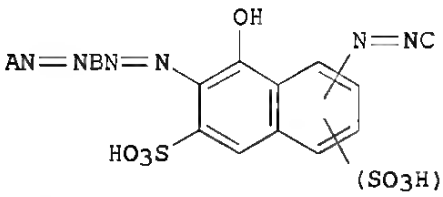
IT Azo **dyes**
(disazo **dye** preparation for water-thinned black jet-printing **inks**)

IT **Inks**

(jet-printing, water-thinned, black; disazo **dye** preparation for)
IT 195868-97-4P 195869-04-6P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(black **dye**; disazo **dye** preparation for water-thinned black jet-printing **inks**)
IT 102-56-7, 2,5-Dimethoxyaniline 120-71-8, 2-Methoxy-5-methylaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling and diazo component; disazo **dye** preparation for water-thinned black jet-printing **inks**)
IT 90-51-7, Gamma **acid** 140-31-8, 1-Piperazineethanamine
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling component **precursor**; disazo **dye** preparation for water-thinned black jet-printing **inks**)
IT 5855-84-5P, 6-(4-Carboxyanilino)-4-hydroxy-2-naphthalenesulfonic acid 178693-55-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(coupling component; disazo **dye** preparation for water-thinned black jet-printing **inks**)
IT 195869-12-6P, 2-Methoxy-5-methyl-4-[4-(2-sulfatoethylsulfonyl)phenylazo]aniline
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(diazo component precursor; disazo **dye** preparation for water-thinned black jet-printing **inks**)
IT 195869-19-3P, 2-Methoxy-5-methyl-4-[4-(2-morpholinoethylsulfonyl)phenylazo]aniline
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(diazo component; disazo **dye** preparation for water-thinned black jet-printing **inks**)
IT 2494-89-5, 4-(2-Sulfatoethylsulfonyl)aniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(diazo component; disazo **dye** preparation for water-thinned black jet-printing **inks**)
IT 110-91-8, Morpholine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; disazo **dye** preparation for water-thinned black jet-printing **inks**)

L20 ANSWER 12 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:905855 HCAPLUS
DN 124:32257
ED Entered STN: 09 Nov 1995
TI Near-infrared-readable recording liquids, recording method, and reading method
IN Sano, Hideo; Murata, Jukichi
PA Mitsubishi Kagaku KK, Japan; Mitsubishi Chemical Corp.
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D011-00
ICS C09D011-00; B41M003-14; C09D011-02
CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): 41, 74
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	JP 07224238	A2	19950822	JP 1994-18339	19940215
	JP 3486944	B2	20040113		
PRAI	JP 1994-18339		19940215		
OS	MARPAT 124:32257				
GI					



I

AB Title liqs. contain water-based medium and trisazo colorants as free acids I [A, C = (substituted) Ph, (substituted) naphthyl; B = (substituted) phenylene, naphthylene; n = 0, 1]. Printed materials using the liqs. are irradiated by near-IR beam to absorb near IR and read information by detecting reflected other light. The recorded materials are also claimed. Thus, diethylene glycol 10, iso-Pr alc. 3, I (A = 4-amino-2-sulfophenyl, B = 6-sulfo-1,4-naphthalene, C = 4-amino-2,5-diethoxyphenyl) 3, and water to 100 parts treated by LiOH to control pH 10 was jet-printed onto an electrophotog. printing paper to give black printed material showing good discoloration prevention under light and water resistance.

ST recording **ink** near IR readable; sulfonaphthalene trisazo **dye** jet printing **ink**; aminodiethoxyphenyl trisazo **dye** jet printing **ink**; light resistance jet printing **ink**; water resistance jet printing **ink**; aminosulfophenyl trisazo **dye** jet printing **ink**

IT **Inks**
(jet-printing, water-thinned, water-based jet-printing **inks** containing trisazo naphthyl **dyes** for optical detection by using near IR)

IT 90-51-7, 7-Amino-1-hydroxynaphthalene-3-sulfonic **acid** 94-85-9, 2,5-Diethoxyaniline 119-79-9 70867-88-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(**dye precursor**; water-based jet-printing **inks** containing trisazo naphthyl **dyes** for optical detection by using near IR)

IT 159757-11-6P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**dye**; water-based jet-printing **inks** containing trisazo naphthyl **dyes** for optical detection by using near IR)

IT 171729-29-6 171729-30-9
RL: TEM (Technical or engineered material use); USES (Uses)
(**dye**; water-based jet-printing **inks** containing trisazo naphthyl **dyes** for optical detection by using near IR)

L20 ANSWER 13 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:787200 HCAPLUS
DN 123:172636
ED Entered STN: 13 Sep 1995
TI Manufacture of derivatives of 4,4'-bis[4-(2,5-disulfoanilino)-2-s-triazinylamino]stilbene-2,2'-disulfonic acid for optical brighteners for

paper
IN Zwierzynski, Krzysztof; Tarwacki, Andrzej; Higersberger, Ewa; Malasnicki, Wladyslaw L.; Rudzinska, Benita; Kalinowski, Jan; Guzewska, Teresa; Intek, Wieslaw
PA Instytut Przemyslu Organicznego, Pol.
SO Pol., 6 pp.
CODEN: POXXA7
DT Patent
LA Polish
IC ICM C07D251-68
CC 41-10 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 43
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI PL 163456	B1	19940331	PL 1991-290136	19910506
PRAI PL 1991-290136		19910506		

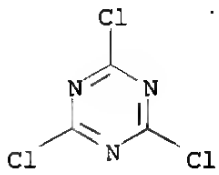
OS CASREACT 123:172636; MARPAT 123:172636
GI For diagram(s), see printed CA Issue.
AB Synergistic mixts. of triazine derivs. I [X = diethanolamino, morpholino, or diethylamino, X1 = (2-cyanoethyl)(2-hydroxyethyl)amino, M = Na or H], triazine derivative I (X = X1 = (2-cyanoethyl)(2-hydroxyethyl)amino, M = Na or H), and triazine derivs. I (X, X1 = diethanolamino, morpholino, or diethylamino, M = Na or H) for the title use are manufactured by reacting cyanuric chloride (II) with 2,5-disodiosulfoaniline (III) at III-II mol ratio (0.9-1.1):1, -5 to +40°, and pH 0.5-6.0 in water, reacting the resulting intermediate without purification with di-Na 4,4'-diaminostilbene-2,2'-disulfonate(IV) at IV-II mol ratio (0.35-0.50):1, 10-70°, and pH 2.5-8.0 in water, and reacting the 2nd intermediate without purification with N-(2-cyanoethyl)ethanolamine (V) and diethanolamine, morpholine, or Et2N at amine-II mol ratio (1.0-1.2):1, V-other amine mol ratio 1:(0.1-9.0), and 90-101°, raising the pH to 3-13, removing the water by distillation, and optionally decreasing the pH to ≤5.
ST sulfoanilino triazinylamino stilbenedisulfonate deriv optical brightener; ethylamino triazinylaminostilbene deriv optical brightener; morpholino triazinylaminostilbene deriv optical brightener; ethanolamino triazinylaminostilbene deriv optical brightener; cyanoethylethanolamino triazinylaminostilbene deriv optical brightener; paper optical brightener triazinylaminostilbene deriv
IT Fluorescent brighteners
(manufacture of mixts. of derivs. of bis[(disulfoanilino)triazinylamino]stilbenedisulfonic acid for optical brighteners for paper)
IT 17752-68-0P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; manufacture of mixts. of derivs. of bis[(disulfoanilino)triazinylamino]stilbenedisulfonic acid for optical brighteners for paper)
IT 109-89-7DP, Diethylamine, reaction products with hexasodium bis[(disulfoanilino)triazinylamino]stilbenedisulfonate 110-91-8DP, Morpholine, reaction products with hexasodium bis[(disulfoanilino)triazinylamino]stilbenedisulfonate 111-42-2DP, Diethanolamine, reaction products with hexasodium bis[(disulfoanilino)triazinylamino]stilbenedisulfonate 33759-44-3DP, N-(2-Cyanoethyl)ethanolamine, reaction products with hexasodium bis[(disulfoanilino)triazinylamino]stilbenedisulfonate 142050-95-1DP, reaction products with (cyanoethyl)ethanolamine and secondary amines

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of mixts. of derivs. of bis[(disulfoanilino)triazinylamino]stil benedisulfonic acid for optical brighteners for paper)

IT **108-77-0**, Cyanuric chloride 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-disulfonate 41184-20-7, 2,5-Disodiosulfoaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(**precursor**; manufacture of mixts. of derivs. of bis[(disulfoanilino)triazinylamino]stilbenedisulfonic **acid** for optical brighteners for paper)

IT **108-77-0**, Cyanuric chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(**precursor**; manufacture of mixts. of derivs. of bis[(disulfoanilino)triazinylamino]stilbenedisulfonic **acid** for optical brighteners for paper)

RN 108-77-0 HCAPLUS
CN 1,3,5-Triazine, 2,4,6-trichloro- (9CI) (CA INDEX NAME)



L20 ANSWER 14 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:618943 HCAPLUS
DN 123:125280
ED Entered STN: 17 Jun 1995
TI Radiation indicator **ink**. 3. Preparation method
AU Yamagami, Masayuki; Miyoshi, Hirofumi; Chubachi, Mitsuo; Kawata, Akira; Kitajima, Koichiro; Hanaoka, Akira
CS Research Institute Advanced Science and Technology, University Osaka Prefecture, Sakai, 593, Japan
SO RadTech Asia '93 UV/EB Conf. Expo., Conf. Proc. (1993), 568-73 Publisher: RadTech Japan, Tokyo, Japan.
CODEN: 61CMAR
DT Conference
LA English
CC 71-7 (Nuclear Technology)
Section cross-reference(s): 41
AB A method is presented for manufacturing a color indicator **ink** for screen printing, and the properties of this **ink** are given. The composition of the **ink**, in comparison with that of label-shaped indicator **ink** and photogravure printing indicator **ink** is presented. The color-changing principle used by this indicator is shown by an equation. When the indicator is exposed to radiation (e.g. γ-rays), HCl is released from poly(vinyl chloride). The HCl reacts with diethylaminoazobenzene (an acid-sensitive **dye**), resulting in a change of the indicator **ink** from yellow to red. This indicator was also useful for measuring absorbed electron doses. When compared with the label-shaped radiation indicator now in wide use, this new indicator is advantageous in that it can be applied directly on the packing paper of medical supplies, thus allowing sterilization of a large number of medical supplies at one time and reducing the time required for

sterilization.
ST radiation indicator **ink** medical supply; sterilization medical supply indicator **ink**; diethylaminoazobenzene radiation indicator **ink**
IT **Inks**
(color-indicator; radiation indicator **ink** preparation based on exposure of poly(vinyl chloride) to **released** hydrochloric **acid** from gamma-ray bombardment)
IT Electron beam
(radiation indicator **ink** preparation based on exposure of poly(vinyl chloride) to **released** hydrochloric **acid** from electron bombardment)
IT Gamma ray
(radiation indicator **ink** preparation based on exposure of poly(vinyl chloride) to **released** hydrochloric **acid** from gamma-ray bombardment)
IT Dosimeters
Dosimetry
(radiation indicator **ink** preparation based on exposure of poly(vinyl chloride) to **released** hydrochloric **acid** from irradiation)
IT 123-86-4
RL: NUU (Other use, unclassified); USES (Uses)
(Bu acetate in preparation of radiation indicator **ink**)
IT 78-93-3, Methyl ethyl ketone, uses
RL: NUU (Other use, unclassified); USES (Uses)
(MEK in preparation of radiation indicator **ink**)
IT 91-66-7P, Diethylaminobenzene
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acid-sensitive **dye**; radiation indicator **ink** preparation)
IT 166515-72-6, AD 51
RL: NUU (Other use, unclassified); USES (Uses)
(antioxidant in preparation of radiation indicator **ink**)
IT 108-94-1, Cyclohexanone, uses
RL: NUU (Other use, unclassified); USES (Uses)
(cyclohexanone in preparation of radiation indicator **ink**)
IT 7647-01-0, Hydrochloric acid, processes
RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); RCT (Reactant); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent)
(radiation indicator **ink** preparation based on exposure of poly(vinyl chloride) to **released** hydrochloric **acid**)
IT 9002-86-2, Polyvinyl chloride
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(radiation indicator **ink** preparation based on exposure of poly(vinyl chloride) to **released** hydrochloric **acid**)
IT 9003-22-9, Vinyl chloride-vinyl acetate copolymer
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(radiation indicator **ink** preparation based on polymer)
IT 1330-78-5, Tricresyl phosphate
RL: NUU (Other use, unclassified); USES (Uses)
(tricresyl phosphate in preparation of radiation indicator **ink**)

L20 ANSWER 15 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1991:473775 HCAPLUS

DN 115:73775
ED Entered STN: 23 Aug 1991
TI Thermal-transfer media forming negative images
IN Usami, Tomomasa; Shimomura, Teruhiro
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B41M005-28
CC 42-11 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03021495	A2	19910130	JP 1989-154749	19890619
PRAI	JP 1989-154749		19890619		

AB The title media comprise substrates and **ink** layers containing decolorizing agents and microcapsules containing leuco electron donor **dye precursors** and **acid**-forming photosensitizers. Thus, an **ink** contained triphenylquinaldine, and microcapsules containing crystal violet lactone and 2-(p-methoxyphenyl)-4,6-bis(trichloromethyl)triazine.
ST thermal transfer neg image; decolorizing agent transfer neg; triphenylquinaldine decolorizing agent transfer
IT Polyoxyalkylenes, uses and miscellaneous
RL: USES (Uses)
(decolorizing agents, for **dyes** in neg. thermal-transfer sheets)
IT Decolorizing agents
(for thermal-transfer sheets forming neg. images)
IT Printing, nonimpact
(thermal-transfer, sheets, neg., decolorizing agents, leuco **dyes** and photosensitive developers for)
IT 135327-57-0
RL: USES (Uses)
(decolorizing agents, for **dyes** in neg. thermal-transfer sheets)
IT 3584-23-4
RL: USES (Uses)
(photosensitive color developers, for neg. thermal-transfer sheets)

L20 ANSWER 16 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1981:48906 HCAPLUS
DN 94:48906
ED Entered STN: 12 May 1984
TI Pen with chemically produced **ink**
IN Witz, Ilona
PA Kores Holding Zug A.-G., Switz.
SO Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DT Patent
LA German
IC C09D011-16; C09D013-00
CC 42-2 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 17889	A1	19801029	EP 1980-101852	19800408
	R: CH, DE, FR, GB, IT				

	AT 7902724	A	19821115	AT 1979-2724	19790410
	AT 371406	B	19830627		
	JP 55147575	A2	19801117	JP 1980-46953	19800411
PRAI	AT 1979-2724		19790412		
	AT 1980-1741		19800331		

AB Writing utensils form marks only on desired substrates by chemical reaction between **dye precursors** and **acid** compds., only 1 of which is contained within the writing utensil. Thus, a crayon is prepared from a mixture of hydrocarbon wax (m. 65-90°) 96.3, ZnCl2 3.0, and Vaseline 0.7 part. This crayon makes blue marks on paper coated with a mixture of crystal violet lactone, dithiourea, and a binder.

ST crayon marking surface treated; acid crayon marking surface; zinc chloride crayon; **dye** substrate marking selective

IT Acids, uses and miscellaneous
RL: USES (Uses)
(crayons containing, for marking on **dye** precursor-coated surfaces)

IT Marking
Writing
(on **dye precursor**-coated substrates, with **acid**-containing crayons)

IT **Dyes**
(precursors, on substrates for marking with acid-containing crayons)

IT Coloring materials
(crayons, acid-containing, for marking on **dye** precursor-coated substrates)

L20 ANSWER 17 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1980:182677 HCAPLUS
DN 92:182677
ED Entered STN: 12 May 1984
TI Correction medium for image recording materials
IN Witz, Ilona
PA Kores Holding Zug A.-G., Switz.
SO Brit. UK Pat. Appl., 4 pp.
CODEN: BAXXDU
DT Patent
LA English
IC B41M005-12
CC 42-12 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2022013	A	19791212	GB 1979-14814	19790427
	GB 2022013	B2	19821020		
	AT 7803783	A	19861115	AT 1978-3783	19780524
	JP 55000781	A2	19800107	JP 1979-62300	19790522
	ES 480896	A1	19800116	ES 1979-480896	19790524
PRAI	AT 1978-3783		19780524		

AB Correction materials for images based on the color-forming reaction of a **dye precursor** and a Lewis **acid** comprise a dispersion of a binder and a reducing agent in a liquid medium. The materials decolorize a wrongly typed character so the correct character can be retyped. Thus, a dispersion containing hexamethylenetetramine [100-97-0] 2, polyethylene [9002-88-4] 18, water 70, and EtOH 10 parts was used to fill a ball-point pen. The composition was especially suitable for eradicating registration materials based on the color-forming reaction of crystal violet lactone and ZnCl2.

ST correction fluid compn typing; **ink** image correction fluid;

reducing agent correction fluid; hexamethylenetetramine correction fluid typing; reducing agent correction fluid typing; binder **ink** correction fluid; polyethylene binder correction fluid

IT Waxes and Waxy substances
RL: USES (Uses)
(binders, correction fluids containing reducing agents and, for typing errors)

IT Typewriter ribbons
(correction tapes for, containing reducing agents and binders)

IT Copying paper
(carbonless, correction fluids for)

IT **Inks**
(typewriter-ribbon, correction fluids for, containing reducing agents and binders)

IT 9002-88-4 9002-89-5 36653-82-4D, polymers
RL: USES (Uses)
(binders, correction fluids containing reducing agents and, for typing errors)

IT 57-06-7 62-56-6, uses and miscellaneous 111-48-8 124-30-1 149-30-4 3129-91-7 7632-00-0
RL: USES (Uses)
(reducing agents, correction fluids containing binder and, for typing errors)

IT 100-97-0, uses and miscellaneous
RL: USES (Uses)
(reducing agents, correction fluids containing binder and, for typing mistakes)

L20 ANSWER 18 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1979:524877 HCAPLUS
DN 91:124877
ED Entered STN: 12 May 1984
TI Fiber-reactive aminoindan azo dyes
IN Horyna, Jaroslav; Kohoutek, Vaclav; Cepciansky, Igor; Majer, Jaroslav; Mejstrik, Bohumir
PA Czech.
SO Czech., 16 pp.
CODEN: CZXXA9
DT Patent
LA Czech
IC C09B062-40
CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 177222	B	19770729	CS 1971-4364	19710615
	DE 2229314	A	19721221	DE 1972-2229314	19720615
	FR 2141943	A1	19730126	FR 1972-21556	19720615
	FR 2141943	B1	19771223		
	IT 956625	A	19731010	IT 1972-25751	19720615
	GB 1395350	A	19750521	GB 1972-27972	19720615
PRAI	CS 1971-4364		19710615		
	CS 1971-4452		19710617		

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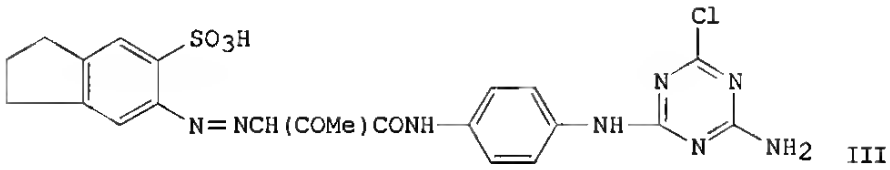

III

AB 5-Aminoindan-6-sulfonic **acid** (I) [36125-91-4] or 4-aminoindan-7-sulfonic **acid** [36125-90-3] is diazotized, coupled with an aromatic amine, amino azo dye, or their **precursors**, and condensed with a reactive polyhalo compound, e.g., cyanuric chloride (II) [**108-77-0**] or cyanuric bromide [14921-00-7] or a reactive azo dye. The residual halogen atoms may be displaced by NH3 or an amine. Thus, I was diazotized, coupled with 4-O2NC6H4NHCOCH2COMe [4835-39-6], reduced with NaSH, condensed with II, and reacted with aqueous NH3 giving III [41614-23-7], a greenish yellow reactive dye for cotton.

ST fiber reactive azo dye; aminoindan azo reactive dye; indan azo reactive dye; chlorotriazine azo dye; cellulose fiber reactive dye

IT Dyes, reactive
(indansulfonic acid azo derivs., chlorotriazinyl group containing, for cellulosic fibers)

IT 36125-90-3
RL: USES (Uses)
(coupling of diazotized, with (acetylamino)hydroxynaphthalene sulfo derivs.)

IT 36125-91-4
RL: USES (Uses)
(coupling of diazotized, with nitroacetoacetanilide or aminonaphthalenesulfonic acid)

IT 119-79-9 134-34-9 4835-39-6 6361-41-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling of, with diazotized aminoindansulfonic acid)

IT 41614-25-9P
RL: PREP (Preparation)
(manufacture of, as reactive dye for cellulosic fibers)

IT 39480-26-7P 41614-23-7P
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(manufacture of, as reactive dye for cotton)

IT 41614-26-0P 71334-88-8P
RL: PREP (Preparation)
(manufacture of, for use as reactive dye)

IT 71334-89-9P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation and azo coupling with aminonaphthalenesulfonic acid)

IT 71334-86-6P 71334-87-7P 71334-90-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with cyanuric chloride)

IT 14921-00-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with amino azo dye)

IT 108-77-0
RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with amino azo dyes)

L20 ANSWER 19 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1975:74646 HCAPLUS
DN 82:74646
ED Entered STN: 12 May 1984
TI Hectographic master sheets
IN Neale, David J.; Dawney, Stanford F.
PA Lamson Industries Ltd.
SO Brit., 6 pp. Division of Brit. 1,367,887.
CODEN: BRXXAA
DT Patent
LA English
IC B41M
CC 42-12 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1367888	A	19740925	GB 1972-48048	19710813
PRAI	GB 1972-48048		19710813		

AB A clean nonsticky master was prepared containing a leucauramine derivative as **acid**-developable colorless **dye precursor** dispersed in an EtOH-soluble oil with a filler, a surfactant, resin binder, and solvent. Thus, a coating was prepared of fatty gray carnauba wax 5.90, H67612 (Na p-carboxyphenylleucauramine) [37466-20-9] 25.00, spindle oil 12.00, soya lecithin 0.60, TiO2 6.10, Et cellulose [9004-57-3] 1.60, and PhMe 48.80 wt.parts. When coated at 17-25 g/m2, 40-75 good quality blue-purple images were obtained. The paper was pleasant to handle and clean in use.
ST leucauramine coating hectog master; **ink** hectog leucauramine
IT Copying paper
(coatings for hectog. master)
IT Coating materials
(for hectog. master sheets)
IT **Inks**
(hectog., containing leucauramine **dye** precursors)
IT Castor oil
RL: USES (Uses)
(in hectog. master coatings)
IT Hectography
(masters for, clear nonsticky coatings for)
IT Lecithins, uses and miscellaneous
RL: USES (Uses)
(soybean, dispersing agents, for hectog. master coatings)
IT Lubricating oils
(spindle oil, in hectog. master coatings)
IT 9004-57-3
RL: USES (Uses)
(binder, for **inks** in hectog. masters)
IT 35294-72-5 37466-20-9
RL: USES (Uses)
(**dye** precursor, for hectog. masters)
IT 139-07-1
RL: USES (Uses)
(surfactants, in hectog. master coatings)

L20 ANSWER 20 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1974:554467 HCAPLUS
DN 81:154467

ED Entered STN: 12 May 1984
TI Transfer printing of textiles
IN Mizuno, Shogo
PA Dai Nippon Printing Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
NCL 48B20; 116F0
CC 39-7 (Textiles)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 49057190	A2	19740603	JP 1972-101408	19721009
	JP 51000239	B4	19760106		
	US 3918895	A	19751111	US 1973-331347	19730212
	NL 7302987	A	19740411	NL 1973-2987	19730302
PRAI	JP 1972-101408		19721009		

AB Paper is release coated with a mixture of resin and solid which dissolves the resin at high temps., printed with an **ink** containing **dyes**, attached to a fabric, and pressed with heating to transfer the printed release layer to the fabric; the fabric is heated to fix the **dyes** and washed. Thus, a roll of glassine paper was coated with a mixture of rosin-modified maleic acid resin of softening temperature 156-65.deg. 30, acetylsalicylic acid [50-78-2] 20, EtOH 30, and PhMe 40 parts to 20 g/m2, dried, printed with mixts. of disperse **dye** 10, cellulose Et ether 13, CaCO3 3, maleic acid 1, EtOH 10, EtOAc 10, and PhMe 50 parts (one of Kayalon Polyester Light Yellow 6GL-S, Kayalon Polyester Red BL-SF Paste, and Kaylon Polyester Turquoise Blue GL-SF in each of 3 **inks**), attached to a polyester fabric, and pressed at 140.deg. and 200 kg/cm2. The fabric was released from the paer, heated in steam at 125.deg., and washed to give a delicately printed fabric with good hand.

ST transfer printing textile; release coated paper printing; polyester fiber transfer printing

IT Polyester fibers
RL: USES (Uses)
(printing on, by transfer, release coatings for, acetylsalicylic acid in)

IT Paper
(release coatings for, resins containing acetylsalicylic acid as)

IT Coating materials
(release, resins containing acetylsalicylic acid, for printing on polyester textiles, by transfer)

IT Textile printing
(transfer, release coatings for, acetylsalicylic acid in)

IT 2-Butenedioic acid (Z)-, polymers, rosin-modified
RL: USES (Uses)
(coatings, **release**, containing acetylsalicylic **acid**, for printing on polyester textiles, by transfer)

IT 50-78-2
RL: USES (Uses)
(coatings containing, release, for textile printing on polyester textiles, by transfer)

L20 ANSWER 21 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1973:44966 HCAPLUS
DN 78:44966
ED Entered STN: 12 May 1984

TI Printing of polyester textiles by the transfer process
IN Defago, Raymond; Angliker, Hans Jorg; Holzrichter, Herbert; Kneubuehler, Werner; Peter, Richard
PA Ciba-Geigy A.-G.
SO Ger. Offen., 44 pp.
CODEN: GWXXBX
DT Patent
LA German
IC D06P; C09D
CC 39-7 (Textiles)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2219978	A	19721116	DE 1972-2219978	19720424
	DE 2219978	B2	19760408		
	DE 2219978	C3	19761125		
	CH 716069	A4	19740930	CH 1971-6069	19710426
	CH 560285	B	19750327		
	FR 2136457	A5	19721222	FR 1972-13313	19720414
	ZA 7202605	A	19730131	ZA 1972-2605	19720418
	AU 7241299	A1	19731025	AU 1972-41299	19720418
	US 3782896	A	19740101	US 1972-245648	19720419
	CS 160058	P	19750228	CS 1972-2664	19720420
	IT 952752	A	19730730	IT 1972-49814	19720424
	BE 782603	A1	19721025	BE 1972-116726	19720425
	NL 7205589	A	19721030	NL 1972-5589	19720425
	DD 95222	C	19730122	DD 1972-162567	19720425
	BR 7202516	A0	19730607	BR 1972-2516	19720425
	SU 455552	D	19741230	SU 1972-1780201	19720425
	ES 402058	A1	19751116	ES 1972-402058	19720425
	GB 1395188	A	19750521	GB 1972-19474	19720426
	US 3940246	A	19760224	US 1973-398894	19730919
	US 4029467	A	19770614	US 1976-647478	19760108
PRAI	CH 1971-6069		19710426		
	CH 1972-2551		19720222		
	US 1972-245648		19720419		
	US 1973-398896		19730919		

AB Polyester textiles were printed with migration-, light-, heat-, and wetfast shades with the **dye** 3,4-Me[(NC)2C:CH]C6H3N(CH2CH2OH)2 (I) by the transfer process, whereby the **dye** was fixed to the textile by treatment with isocyanates or their precursors together with, prior to, or after print transfer. Thus, an intermediate paper layer for transfer printing was printed with an **ink** from I 1, Et cellulose 10, EtOH 42.5, and MeCOEt 42.5 parts. Polyester fibers were impregnated with a 1 1. CCl2:CCl2 solution containing 50 g N,N'-bis[bis(ethoxycarbonyl)acetyl]hexamethylenediamine [38215-34-8] and dried. The above intermediate layer was placed onto the textile and the printing transferred with a tailor's press within 60 sec at 220.deg..
ST polyester textile printing transfer; isocyanate polyester textile printing
IT Textile printing
(by transfer process, fixatives for, diisocyanate precursors as)
IT Acrylic fibers
Polyamide fibers
Polyester fibers
RL: USES (Uses)
(printing on, by transfer process, fixatives for, diisocyanate precursors as)
IT Isocyanic **acid**, diesters

RL: USES (Uses)
(**precursors** for, as fixatives for textile printing by transfer process)
IT 38215-34-8 40382-32-9
RL: USES (Uses)
(fixatives, for textile printing by transfer process)

L20 ANSWER 22 OF 22 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1973:31603 HCAPLUS
DN 78:31603
ED Entered STN: 12 May 1984
TI UV Light-hardening printing **inks**
IN Rosenkranz, Hans Juergen; Haus, Artur; Rudolph, Hans
PA Farbenfabriken Bayer A.-G.
SO Ger. Offen., 9 pp.
CODEN: GWXXBX
DT Patent
LA German
IC C09D
CC 42-12 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2105179	A	19720810	DE 1971-2105179	19710204
	DE 2105179	B2	19730607		
	NL 7201314	A	19720808	NL 1972-1314	19720201
	IT 948401	A	19730530	IT 1972-48093	19720202
	AT 313929	B	19740311	AT 1972-811	19720202
	GB 1348951	A	19740327	GB 1972-5115	19720203
	ES 399448	A1	19741016	ES 1972-399448	19720203
	CH 572967	A	19760227	CH 1972-1564	19720203
	BE 778971	A1	19720804	BE 1972-113632	19720204
	FR 2124501	A5	19720922	FR 1972-3848	19720204
	FR 2124501	B1	19770401		
PRAI	DE 1971-2105179		19710204		

AB The title **inks** of pot life 2-3 days and useful for gravure and flexog. printing contained acid-hardening resins 5-30, phys. drying resins .1eq.30, solvents (b. <150.deg.) 30-90, and pigment **dyes** [containing 1-6% **acid-releasing** photoinitiators (A)] <30%. A were, e.g., halomethylated benzophenones or α-(sulfonyloxymethyl)benzoins.
ST printing **ink**; gravure printing **ink**; flexog printing **ink**; photoinitiator printing **ink**; acid hardening resin **ink**; halomethylated benzophenone photoinitiator **ink**; benzoin sulfonate photoinitiator **ink**
IT Ultraviolet light, chemical and physical effects
(crosslinking by, of printing **inks**, photoinitiators for)
IT **Inks**
(printing, containing benzoin derivative-benzophenone derivative photoinitiators,
uv light-curable)
IT 1-Propanone, 2,3-dihydroxy-1,2-diphenyl-, derivs., sulfonates
Methanone, diphenyl-, halomethylated, uses and miscellaneous
RL: USES (Uses)
(photoinitiators, for uv light-curable printing **inks**)

=> => FILE WPIX
FILE 'WPIX' ENTERED AT 16:33:31 ON 30 APR 2004

FILE LAST UPDATED: 29 APR 2004 <20040429/UP>
MOST RECENT DERWENT UPDATE: 200428 <200428/DW>
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>>> THE DISPLAY LAYOUT HAS BEEN CHANGED TO ACCOMODATE THE NEW FORMAT GERMAN PATENT APPLICATION AND PUBLICATION NUMBERS. SEE ALSO:
http://www.stn-international.de/archive/stnews/news0104.pdf <<<

>>> SINCE THE FILE HAD NOT BEEN UPDATED BETWEEN APRIL 12-16 THERE WAS NO WEEKLY SDI RUN <<<

=> D QUE L21
L13 285 SEA FILE=HCAPLUS ABB=ON DYE# AND ACID(3A)PRECUR?
L21 8 SEA FILE=WPIX ABB=ON L13 AND INK#

=> FILE COMPENDEX
FILE 'COMPENDEX' ENTERED AT 16:33:45 ON 30 APR 2004

FILE LAST UPDATED: 26 APR 2004 <20040426/UP>
FILE COVERS 1970 TO DATE.

<<< SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN THE BASIC INDEX >>>

=> D QUE L22
L13 285 SEA FILE=HCAPLUS ABB=ON DYE# AND ACID(3A)PRECUR?
L22 0 SEA FILE=COMPENDEX ABB=ON L13 AND INK#

=> FILE JICST

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FILE 'JICST-EPLUS' ENTERED AT 16:33:55 ON 30 APR 2004
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FILE COVERS 1985 TO 26 APR 2004 (20040426/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
TERM (/CT) THESAURUS RELOAD.

=> D QUE L23
L13          285 SEA FILE=HCAPLUS ABB=ON  DYE# AND ACID(3A)PRECUR?
L23            0 SEA FILE=JICST-EPLUS ABB=ON  L13 AND INK#


=> FILE JAPIO
FILE 'JAPIO' ENTERED AT 16:34:09 ON 30 APR 2004
COPYRIGHT (C) 2004 Japanese Patent Office (JPO)- JAPIO

FILE LAST UPDATED: 8 APR 2004        <20040408/UP>
FILE COVERS APR 1973 TO DECEMBER 05, 2003

<<< CRAPHIC IMAGES AVAILABLE >>>

=> D QUE L24
L13          285 SEA FILE=HCAPLUS ABB=ON  DYE# AND ACID(3A)PRECUR?
L24            0 SEA FILE=JAPIO ABB=ON  L13 AND INK#


=> FILE WPIX
FILE 'WPIX' ENTERED AT 16:34:22 ON 30 APR 2004
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FILE LAST UPDATED:          29 APR 2004      <20040429/UP>
MOST RECENT DERWENT UPDATE:     200428        <200428/DW>
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    DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
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    LAWSUITS FILED IN THE 94 US DISTRICT COURTS SINCE 1973.
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    http://www.thomsonscientific.com/litalert          <<<

>>> THE DISPLAY LAYOUT HAS BEEN CHANGED TO ACCOMODATE THE
    NEW FORMAT GERMAN PATENT APPLICATION AND PUBLICATION
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NUMBERS. SEE ALSO:
http://www.stn-international.de/archive/stnews/news0104.pdf <<<

>>> SINCE THE FILE HAD NOT BEEN UPDATED BETWEEN APRIL 12-16
THERE WAS NO WEEKLY SDI RUN <<<

=> D QUE L21
L13 285 SEA FILE=HCAPLUS ABB=ON DYE# AND ACID(3A)PRECUR?
L21 8 SEA FILE=WPIX ABB=ON L13 AND INK#

=> D ALL 1-8
L24 HAS NO ANSWERS
L13 285 SEA FILE=HCAPLUS ABB=ON DYE# AND ACID(3A)PRECUR?
L24 0 SEA FILE=JAPIO ABB=ON L13 AND INK#

=> D L21 ALL 1-8

L21 ANSWER 1 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2004-203631 [19] WPIX
DNC C2004-080309
TI Organic solvent-based printing **ink** composition for use as gravure printing **ink** or as toning agents, comprises cationic dyestuff, organic solvent, organic resin acid or salt soluble in organic solvent.
DC A97 E21 E23 G02
IN FRASER, I F; NIVEN, S C; WILCOX, J
PA (CIBA) CIBA SPECIALTY CHEM HOLDING INC
CYC 105
PI WO 2004013237 A1 20040212 (200419)* EN 33 C09D011-02
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
ADT WO 2004013237 A1 WO 2003-EP7772 20030717
PRAI EP 2002-405651 20020726
IC ICM C09D011-02
AB WO2004013237 A UPAB: 20040318
NOVELTY - An organic solvent-based printing **ink** composition, comprises a cationic dyestuff or a mixture; an organic solvent; an organic resin acid, or a salt, soluble in the organic solvent; and optionally a pigment.
DETAILED DESCRIPTION - An organic solvent-based printing **ink** composition, comprises a cationic dyestuff of formula (1) or a mixture; an organic solvent; an organic resin acid, or a salt, soluble in the organic solvent; and optionally a pigment.
R1-R6 = H, optionally substituted alkyl, alkoxy, cycloalkyl, aryl, heteroaryl or allyl;
R2R3 = form a ring;
R5, R6 = halo, cyano, nitro, aryloxy, alkenyl, alkenoxy, alkoxycarbonyl, aryloxycarbonyl, acyloxy, acyl, alkylthio, arylthio, acylamino, alkylsulfonyl, arylsulfonyl or thiocyano;
m = 1-5;
n = 1-4;
X- = organic anion;

substituted alkyl = hydroxyalkyl, halogenoalkyl, aminoalkyl, cyanoalkyl or arylalkyl;
substituted alkoxy = arylalkoxy;
aryl = Ph or naphthyl, optionally substituted by hydroxy-, halogeno-, amino-, cyano-, carboxy-, carbonamido-, sulfo- or sulfonamido.
Any two of R5 or any two of R6 may be combined together to form a homocyclic or heterocyclic aromatic or non-aromatic ring. INDEPENDENT CLAIMS are also included for:
(a) preparation of printing **ink** compositions comprising mixing together a carbinol **dye** precursor of formula (2) or a mixture, with a solution of an organic acid, preferably an organic resin acid, dissolved in an organic solvent, and with optionally a pigment;
(b) preparation of gravure printing **ink** compositions which comprises mixing together a carbinol **dye** precursor (2) or a mixture, with a solution of an organic acid, preferably an organic resin acid, dissolved in an organic solvent, evaporating off the solvent (under reduced pressure) from that mixture until a dry mixture is obtained, and redissolving the dry mixture in an organic solvent compatible with the printing **ink** system, and with optionally an organic pigment;
(c) a dry mixture or co-dissolved mixture of carbinol dry **precursor**, the organic (resin) **acid**, and optionally pigment, used in the process;
(d) extrusion products obtained by the process; and
(e) a process for printing which comprises printing a flat substrate with a predominantly pigment based printing **ink** containing a the compositions as toning agents.
A = -OR, -N(R)2, -N(R)COR, -N(R)SO2R, -SR, -S(O)R, -O2CR, -N(R)CON(R)2, -OCON(R)2, -SO2N(R)2 or -N(R)COOR;
R = R1.
USE - The organic solvent-based printing **ink** composition for use as gravure printing **ink** or as toning agents for predominantly pigment based gravure printing **inks**. It can be in publication or packaging gravure, flexographic, lithographic or letterpress printing process. (All claimed)
ADVANTAGE - The composition shows high color strength and excellent rheological properties.
Dwg.0/0

FS CPI
FA AB; GI; DCN
MC CPI: A12-W07D; E25-E01; G02-A04A

L21 ANSWER 2 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2004-181848 [18] WPIX
DNN N2004-144563 DNC C2004-072024
TI **Ink** for **ink** jet recording comprises **dye**, water, water-miscible organic solvent, and **precursor** of **acid**.
DC E19 G02 T04
IN TAGUCHI, T
PA (FUJF) FUJI PHOTO FILM CO LTD
CYC 33
PI EP 1380623 A1 20040114 (200418)* EN 34 C09D011-00
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
JP 2004043665 A 20040212 (200418) 40 C09D011-00
US 2004011247 A1 20040122 (200418) C09D011-02
ADT EP 1380623 A1 EP 2003-15588 20030714; JP 2004043665 A JP 2002-204171 20020712; US 2004011247 A1 US 2003-617818 20030714
PRAI JP 2002-204171 20020712

IC ICM C09D011-00; C09D011-02
ICS B41J002-01; B41M005-00
AB EP 1380623 A UPAB: 20040324
NOVELTY - An **ink** comprises **dye**, water, water-miscible organic solvent, and **precursor** of **acid**.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
(a) an **ink** set comprising the **ink**; and
(b) a method of inkjet recording comprising recording an image with inkjet printer using the **ink** or inkset.
USE - For **ink** jet recording (claimed).
ADVANTAGE - The invention is resistant to image blur even under high humidity conditions.
Dwg.0/0
FS CPI EPI
FA AB; GI; DCN
MC CPI: E05-G; E06-D; E06-F03; E07-D; E07-F01; E07-F02; E07-H03; E07-H04; E10-A02; E10-A08; E10-A09B1; E10-A10C; E10-A10D; E10-A11A2; E10-A11B2; E10-A12B2; E10-A12C2; E10-A13B2; E10-A18B; E10-A19B; E10-A22; E10-A23B; E10-B01; E10-B02A2; E10-B02E; E10-B03; E10-B04; E10-D03; E10-F02A2; E10-F02C; E10-G01; E10-G02; E10-H01; E10-H04; E10-J02B4; E10-J02D; E25; E32-A02; E32-A05; G02-A04A; G02-A04B; G05-F03
EPI: T04-G02C

L21 ANSWER 3 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1988-364615 [51] WPIX
DNN N1988-276215 DNC C1988-161393
TI Compsn. to judge quantity of desensitising **ink** - contains organic solvent having specified vapour pressure and viscosity.
DC E24 G05 P75 S03
PA (FUJF) FUJI PHOTO FILM CO LTD
CYC 1
PI JP 63274584 A 19881111 (198851)* 5
ADT JP 63274584 A JP 1987-110334 19870506
PRAI JP 1987-110334 19870506
IC B41M005-12; G01N031-22
AB JP 63274584 A UPAB: 19930923
In a compsn. fo judging of the quantity of desensitising **ink** for pressure sensitive recoding paper, an organic solvent having vapour pressure of 50 mm Hg or less and a viscosity of 5 cp or less at 20 deg. C is used in an amount of at least 30 weight% based on the weight of all organic solvents used.
Compsn. is prepared by dissolving a **dye** or its **precursor** and an **acid** substance in organic solvents. As the **dye** or its precursor, methyl yellow, crystal violet lactone, 1-(2-carboxyphenyl)-4-diethyl-amino- 5'-phenylaminofluorane, etc. are mentioned. As the acid substance, salicylic acid, phenols, boric acid, etc. are mentioned. As the organic solvents, aliphatic and alicyclic hydrocarbon solvents are mentioned.
ADVANTAGE - The compsn. is easy to apply and the coating film of the compsn. has improved uniformity of coating weight
0/0
FS CPI EPI GMPI
FA AB; DCN
MC CPI: E10-J02A; E10-J02B4; E10-J02D; G05-D
EPI: S03-E09E

L21 ANSWER 4 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1983-835452 [49] WPIX

DNN N1983-217876 DNC C1983-118805
TI Solid **ink** for heat transfer - contains pale **dye** **precursor**, an **acid** developing the **dye** and a wax solid at normal temperature.
DC E23 G02 G05 P75
PA (NIPK) NIPPON KAYAKU KK
CYC 1
PI JP 58183770 A 19831027 (198349)* 4
PRAI JP 1982-66232 19820422
IC B41J003-20; B41J031-00; C09D011-00
AB JP 58183770 A UPAB: 19930925
Solid **ink** contains a colourless or lightly coloured dyestuff precursor, an acidic matter (e.g. bisphenol A, maleic acid, etc.) capable of developing the dyestuff precursor when heated, and a cpd. (e.g. carnauba wax, beeswax, paraffin wax, etc.) that is solid at normal temps. but can be melted when heated.

A thermo-transfer recording method includes contacting a substrate (sheet) with the solid **ink** and heating the substrate on the side opposite to the solid **ink** thereby securing the melted **ink** that has been developed onto the substrate.

Unless the solid **ink** is heated, colour would not develop so that it would not foul paper, one's hand or appts. An example of the dyestuff precursors is of formula (I). The dyestuff precursor is used in an amount of 2-40 weight%. The acidic matter is used in an amount of 4-60 weight%.

The cpd. that is solid at normal temps. but can be melted when heated is used in an amount of 50-90 weight%.

0/0
FS CPI GMPI
FA AB
MC CPI: E06-A02; E06-A03; E10-C04F; E10-E02D; E26-B; G02-A04B

L21 ANSWER 5 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1983-13780K [06] WPIX
DNN N1983-025148 DNC C1983-013355
TI **Ink** for heat-fusing type pressure-sensitive paper - prepared by dispersing microcapsules of colouring agent in hydrophobic cpd. giving shortened process.
DC A84 E24 G05 P75
PA (MITY) MITSUBISHI PAPER MILLS LTD
CYC 1
PI JP 57212091 A 19821227 (198306)* 6
JP 03058920 B 19910906 (199140)
ADT JP 03058920 B JP 1981-98074 19810624
PRAI JP 1981-98074 19810624
IC B01J013-02; B41M005-12
AB JP 57212091 A UPAB: 19930925
The **ink** is prepared by dispersing microcapsules of (A) colouring substance in (B) hydrophobic cpd. The microcapsules are produced by dispersing or emulsifying (A), or its solution or dispersion in water or a hydrophilic cpd. in fused (B) and then cooling. Cpd. (B) is solid at normal temperature and melts at above 40 deg.C.

Pref. (A) is ligand, metal cpd., colourless **dye** **precursor** and/or organic **acid**. The water or hydrophilic cpd. comprises water, amines, and/or organic cpd. having alcoholic OH gp. in the molecule. (B) is a natural or synthetic wax, higher alcohol, or higher aliphatic acid. The ligand and metal cpds. are e.g. tannic acid and ammonium metavanadate, phthalonitrile and copper sulphate, etc. The **dye** precursors, are e.g. xanthines, phthalides, spiro, series

cpds., etc.
Since it is not required to remove water on dispersing microcapsules in (B), the process is shortened.
FS CPI GMPI
FA AB
MC CPI: A12-D05; A12-W05; E06-A02; E06-A03; E10-A15A; E10-C04L; E10-E04L; E26-B; E35-A; E35-N; G05-D

L21 ANSWER 6 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1982-46562E [23] WPIX
TI Improved jet printing **ink** compsn. - comprises a binder **precursor** of alkoxy-silane, **acid**, dyestuff and opt. silicone oil and electroconductive agent.
DC A97 G02 P75 T04
IN ARAKAWA, T; MATSUMOTO, T; TOYODA, T
PA (DNTO) DAINIPPON TORYO KK
CYC 4
PI GB 2088402 A 19820609 (198223)* 11
DE 3120534 A 19820609 (198224)
JP 57090068 A 19820604 (198228)
US 4338133 A 19820706 (198229)
GB 2088402 B 19840613 (198424)
JP 59028591 B 19840713 (198432)
DE 3120534 C 19910307 (199110)
ADT GB 2088402 A GB 1981-13794 19810506; JP 57090068 A JP 1980-165657 19801125
PRAI JP 1980-165657 19801125
IC B41J003-04; C08L083-04; C09D011-02
AB GB 2088402 A UPAB: 19930915
Jet printing **ink** compsn. comprises (I) 2-60 weight% of a binder precursor of an alkoxysilane of formula R4-n Si(OH)n (where n= 0-2 and R is a C1-C4 alkoxy gp., methoxyethoxy, ethoxyethoxy or phenoxy gp. or an oligomer of them), (II) 25-95 weight% of a solvent for (I), (III) 0.001-5 weight% of a solvent soluble acid and (IV) 0.1-8 weight% of a solvent soluble dyestuff.
Pref. the compsn. comprises up to 2 weight% of a solvent soluble inert silicone oil for inhibiting blotting and up to a 3 weight% of an electroconductive agent which is lithium chloride, ammonium chloride, lithium nitrate, ammonium nitrate, dimethylamine-hydrochloride, potassium thiocyanate, ammonium thiocyanate, sodiumthiocyanate and mixtures of them. The binder precursor (I) is an alkoxysilane of formula R4Si where R is C1-C4 alkoxy gp., methoxyethoxy, ethoxyethoxy or phenoxy gp. or an oligomer of them. The solvent (II) is lower aliphatic alcohol and a glycol monoether. The solvent soluble acid (III) is HCl, HF, H, SO4 boric acid, phosphoric acid, fumaric acid, benzenesulfonic acid and paratoluene sulfonic acid or mixtures of them. The compsn. also comprises 5 weight% of a solvent soluble resin which is an acrylic resin, a polyvinylbutyral resin, a novolak phenol resin or an epoxy resin.
The compsn. has good **ink** droplet stability and uniformity and **ink** storage stability with good adhesiveness to glass, ceramics such as earthenware and porcelain and silicon wafer together with good water resistance after long storage.
FS CPI EPI GMPI
FA AB
MC CPI: A06-A00E; A12-W07D; G02-A04A
EPI: T04-G02

L21 ANSWER 7 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1982-07818E [04] WPIX
TI Polymer containing 2,5-oxolanylene units - prepared by epoxidising precursor,

e.g. natural rubber, using per acid and subjecting formed oxirane gps. to intramolecular chain reaction.

DC A18 A21 A23 A82 G02
PA (MINN) MINNESOTA MINING CO
CYC 1
PI US 4309516 A 19820105 (198204)* 10
PRAI US 1976-692602 19760602; US 1976-740661 19761110;
US 1977-803207 19770603; US 1981-284229 19810717
IC C08F008-08; C08F112-00
AB US 4309516 A UPAB: 19930915
Homo- or copolymer (A) contains 2,5-oxolanylene units of formula (I) and opt. units of formulae (II), (III) and (IV). At least 60% of units (I) are directly joined to one another to form segments consisting of at least 6 units, the polymer containing 20-100 mole (I), 0-80 mole% (II) and (IV) units combined and 0-20 mole.% (III) units. (R1-R4 are H or up to 8C alkyl; Y is a radical corresponding to the ring opening reagent Y-M; M is H or alkali metal).

A compatible blend of (i) polymer (A) and (ii) polymethyl polymethylmethacrylate, PVC, chlorinated PVC, epoxy resin and/or polyester is also claimed.

Substrates coated with polymers (A) exhibit improved adhesion to various surfaces, e.g. pressure sensitive adhesives show improved adhesion to polyester and polyolefin films coated with the polymers. Normally hydrophobic surfaces can be rendered hydrophilic on applying a coating of polymer (A) e.g. to render polymer films readily receptive to water based **inks** and **dyes**. The polymers may be converted into graft copolymers.

FS CPI
FA AB
MC CPI: A03-B; A04-B01; A07-A01; A07-A02A; A07-A04; A10-E11; A10-E14; G02-A05; G02-A05E; G03-B04

L21 ANSWER 8 OF 8 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1980-79224C [45] WPIX
TI Writing implement - containing a **dye precursor** or **acid** developer, will only write on surfaces containing the complementary components.
DC A84 E24 G02
IN WITZ, I
PA (KORE) KORES HOLDING ZUG AG
CYC 8
PI EP 17889 A 19801029 (198045)* GE
R: CH DE FR GB IT LI
JP 55147575 A 19801117 (198104)
AT 7902724 A 19821115 (198248)
PRAI AT 1979-2724 19790412; AT 1980-1741 19800331
REP DE 2008957; DE 2250145; GB 729242
IC C09D011-16; C09D013-00
AB EP 17889 A UPAB: 19930902
In a writing system based on a **dye** precursor (I) which undergoes a colour-forming reaction with an acid **dye** acceptor (II), the writing implement used contains either the (I) or the (II) in a suitable carrier (III), opt. with other additives. The implement is used to write or draw on a substrate containing the other component of the colour-forming system.

The implement will only write on desired surfaces, and allows children and others to write or draw on those surfaces without being able accidentally or intentionally to mark other surfaces. A wide range of colours can be produced and the implements can be made in the form of ball

point pens, felt tipped pens, **inks** for fountain pens, etc.
FS CPI
FA AB
MC CPI: A12-D05; E06-H; E10-B01A; E26-B; E35; G02-A04; G02-A04A

=>